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DAIRY INDUSTRY CONFERENCE WASHINGTON, D. C.

Under the Auspices of the American Dairy Federation

Following a practice established one year ago, the American Dairy Federation extended very general invitations to the Dairy Industry to a series of meetings to be held in Washington, D. C., April 26, 27 and 28. These meetings were held in cooperation with the United States Department of Agriculture, the Bureau of Dairying and the Bureau of Agricultural Economics and the United States Department of Commerce.

This series of meetings, which demonstrated very fully the various activities of the different branches of the governmental activities, was attended by groups of visitors ranging from 100 to 150 persons. The scope and field of the various meetings, was, on the whole, even greater than that presented last year, and offered to those who attended a very general outline of the functions of the various departments.

The General Program

The following general program was arranged by the Departments of Agriculture and Commerce in cooperation with the committee of the American Dairy Federation.

Tuesday, April 26th

Registration, Hotel Harrington. Meeting in U. S. Department of Agriculture.

Address, Hon. R. W. Dunlap, Assistant Secretary of Agriculture.

Visit to the U. S. Department of Agriculture, Experimental Farm, Beltsville, Md.

(Luncheon at the Farm).

Evening Session

Meeting held in the Auditorium of the New National Museum. Assistant Secretary, Hon. R. W. Dunlap, presiding. Addresses were made on the following subjects:

"Research Work of the Department," by Dr. A. F. Woods, Chief, Research Activities, U. S. Department of Agriculture.

"Progress of T. B. Eradication," by Dr. Fertig, of the Bureau of Animal Industry, U. S. Department of Agriculture.

Motion picture exhibits by the U. S. Department of Agriculture Motion Picture Service.

Wednesday, April 27th

Visits to the Bureau of Dairying and Bureau of Agricultural Economics. Luncheon in the Laboratories of the Bureau of Dairying.

Thursday, April 28th

Visit to the U. S. Department of Commerce, where an address of welcome was made by Assistant Secretary Drake, and the program of the Departmental work outlined by various speakers. This meeting was followed by a reception by the President, Calvin Coolidge, at the White House.

At every one of the various meetings a fund of information and detail of op-

BACTERIA AND WHAT IT MEANS TO THE FARMER

Floyd R. Ealy

Many people think of bacteria as "germs," and as such the cause of disease and much suffering and many deaths. However, we can see if we study them, that they are the best friends of the human family. For every harmful group of bacteria, there are hundreds of types that are very beneficial.

They are, as a rule, very small one-celled organisms which multiply by a

simple ammonia products available for use by the tiny root hairs. All dead plant and animal matter would not decay if it were not for bacteria. Such refuse matter would thus soon pollute the earth. Most soil bacteria require free oxygen to live. Therefore, a dry, airy soil is more productive than a wet, soggy soil. Leguminous plants such as clovers, alfalfa, and soy beans, have nodules or clumps of active bacteria on

their roots. These bacteria are able to take nitrogen from the air and store it in the soil for future crops. Thus, the farmer is increasing the fertility of his soil when he raises leguminous crops as well as producing feed of a high protein and mineral content.

Many of our foods are made by the aid of bacteria. Bacteria in the saliva and intestines break down starch in our foods to digestible sugars. We could not live long without the sugar in our foods to produce heat and energy. The same thing holds true in digestion of food by animals as in human digestion.

From the standpoint of dairymen we

are much interested in bacteria. Milk from the udder of a normal, healthy cow usually contains some bacteria, often only a few hundred per cubic centimes. The first squirts of milk are higher in bacteria due to their entrance through the end of the teat, and in milking should be discarded. It is also low in fat content.

In the process of milking bacteria gets into the milk from dirt which falls from the flanks or udder of the cows. More bacteria may get into the milk if the hands of the milker are dirty or wet, or if his clothes are not clean. One of the greatest sources of bacteria in milk are improperly washed and sterilized utensils. All utensils should be rinsed in lukewarm water, washed with warm water and washing soda, and sterilized with boiling, not merely hot, water.

At the temperature of milk when drawn from the cow, bacteria cells double in number by cell division every few minutes. At a temperature of 60 degrees F., or under, their growth is much retarded. Thus, we see the reason for prompt, efficient cooling of milk.

There are many types of bacteria in milk. The most numerous type are the acid-producers. They feed on the four

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American Dairy Federation Conference, Second Annual Session, Washington, D. C.

eration was presented by groups of speakers, supplemented with literature and data explaining the work of the various departments and bureaus.

The trip to the Beltsville Experiment Station, some 14 miles from Washington, was made by auto bus. About 150 persons attended this session. The party was divided into two groups and addresses were made by Dr. C. W. Larson, Chief of the Bureau. Dr. Greaves outlined the operation and development of the various experimental programs conducted at the Experimental Station, breeding investigations, pure sires as compared with proven sires of to-day, the maturity, growth, conformation and other phases of the various experiments that have been conducted.

Mr. Hearby made a special address on the growth of dairy animals, which he said, followed very definite lines.

Mr. Stuart briefly outlined and showed by means of lantern slides, the various Government Experiment Stations, located in addition to the Beltsville Station, those at Ardmore, S. D., Huntley, Montana; Woodward, Oklahoma, and Genet, La.

Mr. Swent made an address on conformation as compared to production

(Continued on page 10)

division of cells. Unlike plants, they do not have green coloring matter in their cells. Many forms move about by means of tail-like appendages, and in this respect they resemble the lower animal forms.

Bacteria vary in size, but most forms are visible as pin heads after being highly magnified. It was not until the microscope was perfected in 1885, and Pasteur, the French scientist, showed that heating wine and sealing it in an air-tight vessel would prevent fermentation, that we knew much about these tiny organisms. Even yet, there is much to be learned about bacteria.

They may be round, rod-shaped, or spiral-shaped. They may occur singly, as twos or fours, as large clumps, or as long chains. They are the most widely distributed of any form of life. They are found in the air, water, soil, foods, and the digestive system. In fact, they are found everywhere. Some forms require oxygen to live, while others thrive without oxygen.

As crop raisers we see our utter dependence on bacteria. Organic matter and manure that we plow into the soil are complex materials which are absolutely unavailable for plant use. Bacteria in the soil breaks down this material to

MORE CITIES REQUIRE SAFE MILK

Extensive interest of cities in the nation-wide campaign against tuberculosis of livestock is seen in results of a survey recently conducted by the United States Department of Agriculture. A total of 874 cities and towns have ordinances requiring the tuberculin testing of cattle furnishing milk for consumption. Official reports indicate that with the exception of about 1 per cent the ordinances are fairly well enforced.

The action of such cities as Chicago, Cleveland, Detroit, and Louisville in promulgating tuberculin-test requirements has stimulated recent interest in this subject. The survey, however, indicates that the smaller communities also are fully as active in safeguarding their milk supplies.

In addition to the 874 cities having tuberculin-test ordinances, 375 provide an option between tuberculin testing and pasteurization. Thus a total of 1,249 municipalities have taken positive steps to safeguard their milk supplies from possibility of disease transmission.

Fourteen states also have enacted laws

or have issued regulations authorized by law requiring the tuberculin testing of cattle. Though varying in details, the laws have the same general purpose—to safeguard the wholesomeness of milk supplies. In all cases tuberculin tests must be applied by approved graduate veterinarians.

As a basis for skilled tuberculin testing in which the public may have confidence, the Federal and State veterinary officials have prepared lists of "accredited" and "approved" veterinarians. These terms apply to private practitioners who have satisfied Federal and State authorities as to their qualifications.

An examination of the forms of supervision over the tuberculin testing of cattle supplying cities with milk shows the large extent to which cities have accepted the so-called uniform plan of testing. This plan provides Federal and State indemnities for cattle which prove to be tuberculous and which are removed from the herd and slaughtered. The plan is followed by 634 cities. Cities that rely on municipal inspection

alone number 498, while 117 other cities and towns use a combination of the two safeguards or make some other provision for tuberculin testing.

A study of reports from the various States explains the rather general adoption of pasteurization as an additional safeguard even when the cattle are tuberculin tested. Proper pasteurization, as is known, destroys any infection from other disease-producing organisms that may be present. It also gives double assurance that no living tubercle bacilli are present.

Some States, of which Florida is a typical example, receive large quantities of milk from other States. Florida does not have a State-wide tuberculin-testing law, but the city of Miami, for instance, requires pasteurization in addition to tuberculin testing. Much other milk received in the State is also pasteurized since its origin, outside of the State, is beyond the jurisdiction of local inspectors. In several small towns tuberculin testing of cattle is conducted in response to a demand of patrons,

though no official ordinance requires such tests.

These sidelights appear to show the strength of public opinion and the extent to which milk consumers demand safety with respect to their milk supplies. The condition appears to be especially true in States to which tourists and home seekers go for their health.

Several states have issued educational literature dealing with bovine tuberculosis, the evidence of transmission to human beings, plans for eradication, and laws and regulations for suppressing the disease.

Besides this means of stimulating interest in safe milk supplies, various state officials have drafted sample milk ordinances based on successful ordinances elsewhere. In these are embodied effective and practical provisions for dealing with the tuberculosis problem.

Some cities have taken more definite action than others, but evidence is abundant that city "fathers" are becoming more and more concerned in guarding the milk consumed in their communities.

VISCOLIZED MILK DECLARED UNLAWFUL BY DAUPHIN COUNTY COURT

Viscolized milk has been declared unlawful by the Dauphin County Court. In a decision, resulting from a trial on March 29, the court upheld the position taken by the Pennsylvania Department of Agriculture that viscolized milk was a fraud and a violation of the food law, because it was so mixed and prepared as to extend the cream line and make the milk appear better or of greater value than it actually was.

Product Deceiving

In the so-called process of "viscolizing" as operated the cream was separat-

ed from the milk, the fat globules broken up under high pressure, thereby occupying a greater volume and then was remixed with the skimmed milk, pasteurized and put out as "viscolized pasteurized milk." This process extended the cream line approximately five inches on the neck of a quart bottle of milk and consumers were led to believe that the milk so treated actually contained twice as much fat, whereas it contained no more fat and some times less than the standard as shown by a number of tests made.

This process was developed a few years ago, and was put into practice in Pennsylvania during the past year. A number of plants throughout the State made contracts for the process and commenced to sell this type of so-called viscolized milk. The State Department of Agriculture made a thorough study of the situation and as a result of examination of samples concluded such a milk to be unlawful.

Consumers Protected

Notices were then sent to those using the process that the Department con-

sidered the practice unlawful. In order that it might be definitely decided and settled, a case was instituted in the Dauphin County Court. This resulted in the recent verdict favorable to the Department's attitude. The consumers of milk will now be fully protected as the Department has been assured that the decision will be accepted and that the preparation and sale of viscolized milk throughout the state will be immediately discontinued, states Dr. James W. Kellogg, director-chief chemist, Bureau of Foods and Chemistry.

ELECTRICITY ON THE FARM IN NEW JERSEY

Representatives of New Jersey electric power companies met with State officials and farm leaders at the offices of the State Department of Agriculture, on April 20th, in Trenton, N. J., to discuss plans for furnishing further electrical service to rural New Jersey. The conference followed the completion of a survey which was made by the Department at the request of the State Board of Agriculture and endorsed by Governor Moore. The study shows the extent and kind of electrical equipment now used on farms in this State.

Secretary W. B. Duryee pointed out the big opportunity open to them to serve the farmers of the State by making available at reasonable prices electrical current for the operation of labor-saving equipment so essential because of the scarcity of farm help. At the same time they would be providing these families with the comforts and conveniences enjoyed by their city friends. The survey will be used as a basis for the power companies to determine the needs of the farmers. It will also show the

farmers ways in which they may profit by the use of electricity.

It was brought out in the meeting that a greater percentage of New Jersey farmers use electricity than their neighbors of New York and Pennsylvania. Eighty-two per cent. of the poultrymen reporting in the survey were using electricity to light hen houses during the early morning and in evening to stimulate egg production, and consequently were the largest users of current. Dairywomen as a class are also large buyers of electricity, many of them us-

ing it for barn illumination as well as for running milking machines and as power for grinding feeds. Pumps and milking machines are the two chief electrically driven appliances in use at this time. Electric cream separators and fruit graders are growing in popularity.

On the farms equipped with electricity 50 per cent. of the housewives were using electric vacuum cleaners, and about one-third had electric washing machines. Nearly every farm using electricity was found to have an electric iron. Some few had electric cooking ranges.

FARMER'S DIET COMPARED WITH THAT OF CITY WORKER

In his food supply the farmer has a distinct economic advantage over the city workingman with comparable income, according to figures recently analyzed by the Bureau of Home Economics of the United States Department of Agriculture. Food consumption records collected from 1,331 families in Ohio, Kansas, Kentucky and Missouri were studied with a view to learning what classes of foods were chiefly used by these families, and also what proportion of their food was furnished by the farm, and what part was purchased.

The families included in the study were of all sizes, ranging from 2 to 10 persons, but the average for the four States was 4.2 adult-male units. This term, "adult-male unit," refers to the figure obtained by allotting different values to persons of different ages, sex, and occupations that made up these families. Hired help and relatives living with the family were allowed for in calculating, and the foods consumed by persons of various ages were estimated by means of a scale which compared the food needs of each with those of a moderately active man, or an adult-male unit. When the data were tabulated, the figures were compared with similar figures obtained in 1918 by the Bureau of Labor Statistics from about 12,000 workmen's families.

Because of the large amounts of meat, eggs, cheese, milk and cream furnished by the majority of the farms studied, the average farm diet furnished an ample supply of most nutrients considered necessary in a good diet, but particularly calcium and protein. The average workingman apparently gets less of most nutritive factors than he should with the exception of protein, in which he just meets standard requirements. The

farm diet includes an abundance of fatty foods, sweets and cereals, but falls somewhat below the standard for fruits and vegetables. The farmer can and should raise more of these products for home use.

The workingman's family appears to consume practically all foodstuffs in smaller quantities than the farmer's family. When his figures are made comparable with those of the farm family it is seen that the workingman's food costs about 24 per cent. less, but yields about 40 per cent. less nutrients. It is therefore a more expensive diet, from the nutritive standpoint.

HAS IT EVER OCCURRED TO YOU?

That electricity on the farm and in the farm home as well as in many other lines of business has a wide variety of uses. Has it ever occurred to you that electricity may serve as a labor and a money saver and that, as such, is particularly applicable for many farm uses on the whole.

In many states and particularly in Pennsylvania, under recent rulings by the Public Service Commission of that state, the application of electricity on the farm has placed the use of current, at a satisfactory power and light service rate and under certain conditions regulated measures within the reach of many rural sections.

In other words current is now available to the farmer, in most sections, at rates and under conditions which make its use available from an economic standpoint.

To many persons the field of usefulness for electrical energy has been almost exclusively that of furnishing light. That of itself is not an unimportant factor of farm life, but that is not all. From the standpoint of long extension lines this may be costly.

Economical use of electricity is due, in a large measure, to the volume in which it may be used. The greater its use, up to certain volume, fixes its cost and the wider the range of its use, the smaller the cost per unit.

Electrical current on the farm properly applied, means not only the application of efficient power, but at a lower cost, if used for labor saving purposes, but serves as a convenience, which in a way, involves economic costs of operation.

Electricity in the Home

While the use of current for farm operations in general has been recognized, the use of electrical power in the home presents an economy which has an important bearing on the household work. Many electrical appliances are available for cooking, washing, sweeping and for a vast number of the smaller home duties are now available and mean a great deal in saving the effort and lightening the work of the farm household.

In very many cases the actual time required to perform certain household duties has been materially shortened, in fact cut in half and the work in question performed even more efficiently.

Power on the Farm

While many of the farm operations do not require the constant use of power, day after day, the economy and the efficiency of the use of electrical power has been fully demonstrated. In such heavy duty work as silo filling, thrashing, feed grinding, wood sawing, fruit grading and other heavy power purposes there is no question as to its adaptability and economy. In addition to such heavy duty operations electrical current can be used to advantage for grain cleaning, grain mixing, pumping, grain and feed elevation, farm shop machinery power, pumping purposes, etc.

Portable electrical apparatus is available so that many of these operations may be performed by a minimum power equipment. One power unit being thus used for a large variety of purposes.

In the Barn and Dairy

In no other field of usefulness, except probably in the farm home itself, can the value of electricity be demonstrated as can be its use in the barn and dairy.

In the barn the advantage of the use of electric lighting is itself an important factor. But this is not the only purpose for which it may be used. The barn may be ventilated, water for the stock may be pumped and a number of other purposes are available.

In the dairy the use of electrical power is manifold. Milking machines, milk cooling systems, refrigeration, clipping of cows and the handling of the feed are but a few of the many purposes for which electric power may be used and usually on a labor saving basis of cost.

In fact the possibilities of the use of electric current for lighting and power purposes, on the farm, are so wide that its development is growing steadily day by day.

How to Get Electricity on the Farm

Different states have adopted various plans and methods in relation to the installation, use and cost of electrical service for farm light and power purposes.

Under general order No. 28 the Public Service Commission of Pennsylvania has laid down definite rules and regulations governing such installations.

In addition a Joint Committee on Rural Electrification, named by the Pennsylvania State Council of Farm Organizations and the Pennsylvania Electrical Association has been formed, which will act as an intermediary between the farmer and the utility in connection with proposed rural Extensions. This procedure has the approval of the Pennsylvania Service Commission, which will, upon request for general order No. 28, advise that the party making such request for line extension, or service, be referred to John M. McKee, Secretary, of the Joint Committee, Telephone

Building, Harrisburg, Pa., in connection with which the Commission states:

"You will note that the order in its present form is the result of a modification of a prior order made by the Commission upon joint petition of the Pennsylvania State Council of Farm Organizations and the Pennsylvania Electric Association. These two interests have named a joint committee on rural electrification, of which John M. McKee is the Secretary, and have established permanent quarters in the Telegraph Building, Harrisburg, Pennsylvania. The purpose of this committee, which is a purely voluntary organization, is to be of assistance to residents of rural communities who are seeking the extension of electric facilities by securing for them the terms upon which extensions will be made, by reviewing same and by giving co-operative consideration to individual extension problems.

If you so desire you may communicate with the committee directly setting forth your difficulties and it will gladly render you such assistance as it can in arriving at an understanding or adjustment which will be satisfactory to all concerned."

Under the present plan therefore you may obtain the direct cooperation of the Joint Committee on matters referring to the electrification of your farm by communication, either to the commission or to the Secretary of the Joint Committee, as above noted.

This movement is just the beginning of many problems being worked out by the development of proper co-operative effort. Many other problems can be solved by the same method. It simply involves the getting together of the various interests, laying all the cards on the table and considering the problem on a safe and sane basis.

PRICES OF PURE BRED DAIRY CATTLE STEADY TO HIGHER IN 1926

Prices of purebred dairy cattle, including five of the leading breeds, Ayrshire, Brown Swiss, Guernsey, Holstein and Jersey breeds combined, were steady to higher in 1926 than in 1925, according to reports from individual breeders to the United States Department of Agriculture.

Although the sale price information this year is not directly comparable with that of previous years, due to a change in the form used in reporting the information, certain comparisons may be made and these comparisons indicate that the prices are somewhat higher.

Of the 21,137 purebred dairy cattle reported sold, 1,689 were Ayrshire, 270 Brown Swiss, 3,086 Guernsey, 10,950 Holstein and 5,142 Jersey.

Combining the auction and private sales of the above breeds, the results by ages are as follows: Of the 6,124 bulls under one year of age, 33 per cent sold for less than \$50, 35 per cent for prices ranging between \$50 and \$100 and 32 per cent brought \$100 or more. The 3,091 heifer calves divided into similar groups, show 36 per cent sold for less than \$50, 37 percent between \$50 and \$100, and 27 per cent at \$100 or more. Of the 1,741 bulls one year and un-

der three years of age, 46 per cent sold between \$100 and \$200, 30 per cent for less than \$100 and 24 per cent for \$200 or more.

Age and sex group	Number head sold within specified price ranges											
	Under \$50	\$50 but under \$75	\$75 but under \$100	\$100 but under \$150	\$150 but under \$200	\$200 but under \$250	\$250 but under \$300	\$300 but under \$350	\$350 but under \$400	\$400 or above	Total	
Bulls under 1 yr.	1,990	1,248	907	1,140	400	171	93	64	111	6,124		
of age												
Bulls 1 yr. and under 3 yrs. old	74	177	266	516	284	236	75	44	69	1,741		
Bulls 3 yrs. old and over	10	38	79	147	60	27	23	24	45	453		
Females under 1 yr.	1,111	725	407	464	212	80	54	9	29	3,091		
of age												
Females 1 yr. and under 3 yrs. old	138	352	837	1,289	766	392	187	66	142	4,169		
Females 3 yrs. old and over	125	240	569	1,751	1,460	623	360	129	302	5,559		
Total	3,448	2,780	3,065	5,307	3,182	1,529	792	336	698	21,137		
Per cent	16.3	13.2	14.5	25.1	15.1	7.2	3.7	1.6	3.3			

COMPARATIVE PER CENT OF SALES OF THE COMBINED PUREBRED DAIRY CATTLE BREEDS 1923-1926, BY PRICE RANGES

Year	Below \$50 per cent	\$50 to \$250 per cent	\$250 and above per cent
1923	11.4	65.0	23.6
1924	22.3	68.7	9.0
1925	21.0	69.8	9.2
1926	8.4	83.0	8.6

or more. 46 per cent of the aged bulls also brought between \$100 and \$200, 28 per cent selling for less than \$100 and 26 per cent for \$200 or more.

cent less than \$100, while 49 per cent of the heifers one year and under three years of age brought between \$100 and \$200, 19 per cent \$200 or more and 32

per cent less than \$100. Top prices were not reported in 1926, but the highest sales shown were: for bull calves, above \$3,000 compared with a top price of \$2,000 in 1925; for heifer calves, above \$1,000 compared with \$600; for bulls one year and under three years of age and for aged bulls, above \$10,000 compared with top prices of \$3,000 and \$3,500, respectively; for heifers one year and under three years of age, above \$1,000 compared with a top price of \$1,500 and for aged cows, above \$5,000 compared with a top price of \$13,000 in 1925.

This report shows that 52 per cent of the purebred dairy cattle sold in 1926 were sold in the North Central States, 27 per cent in the North Atlantic States, 12 per cent in Southern States and 9 per cent in the Mountain and Pacific Section.

Comparison of the percentages of the total sales in 1926, that sold below \$50, \$50 but below \$250, and for \$250 and above, with corresponding percentages in 1923-1925, indicates that, in general, prices in 1926 were higher than at any time since 1923.

Copies of the detailed reports of the individual breeds may be obtained from the Bureau of Agricultural Economics, United States Department of Agriculture, Washington, D. C.

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Editorial



Farming and dairying are definite business undertakings and to be successful must be operated at a profit.

Economic principles of operation, buying and selling are important factors in their development.

The tendency to depend on any one crop to carry the burden in losses of others is not sound. Every operation should carry its own burden and by careful analysis be made to pay its own way.

Farmers have failed to give this due consideration. Business principles have, to a considerable extent, been lacking. The old spirit of "the farm is my castle" must be replaced by sound business principles if success is to be attained. Beside operation these problems include sound buying and selling.

Satisfactory operation depends upon the owner's knowledge and skill. Selling must be intelligent—cooperative, if you please—but the sound buying practice is largely in the making.

The hand-to-mouth policy of buying, be it feed, fertilizer, seed or whatnot, has always been an expensive proposition. Such retail buying is always at the highest price level.

For the greatest economy buy only on a wholesale or carload basis. Individually this may seem to be an impossibility, but it is not. If you cannot handle such buying individually, why not cooperate with your neighbor? Consult your bank or dealer on financing problems.

Milk and milk products are cash crops. You get your money regularly and you can use it to advantage in obtaining discounts from the regular credit prices. If you are temporarily short of funds

get your bank to advance you credit. As a rule they can do so at a rate that will be cheaper than the cost of buying in quantity rather than at retail rates.

Plan well ahead for your season's needs. You know how much feed or fertilizer or other raw material you will need during a given period, and by the adoption of business principles can make your plans to buy at the cheapest or wholesale rate.

Consult your banker or your local dealer on these better buying methods; they will, no doubt, be glad to help you in developing the economic principles of helping yourself.

The American Dairy Federation, through its cooperation with the National Departments of Agriculture and Commerce, in Washington, D. C., has presented to the Dairy Industry of the United States an opportunity for the industry itself to get in closer touch with the various department leaders themselves, with the idea of becoming better acquainted with the problems and developments of the industry on the whole.

Its recent meetings with the personnel of the Bureau of Dairying, the division of Animal Industry, the division of Agricultural Economics and the Department of Consumers in the closing week of April, has enabled those who attended to obtain a better idea as to the various problems, many of vital interest to the industry, which have been and are now under development.

A closer cooperation along the various lines of endeavor will be helpful, not only to the industry but to the public in general.

These meetings in themselves are fostering the idea of cooperation and closer effort to obtain solutions of real problems and should have the cooperation and support of the industry at large.

PENN STATE DAIRY MARKETING SENIORS MAKE INSPECTION TRIP

A group of 15 senior students in Dairy Marketing at Penn State College, under the direction of Prof. A. A. Borland and Prof. C. D. Dahle, made their customary tour of inspection, covering important centers in Philadelphia and New York.

The trip covered four days, two days in Philadelphia, April 11-12 and two days—April 13-14 in the New York markets.

The itinerary covered visits to plants of the Supplee-Wills-Jones Milk Co., Abbotts Alderney Dairies, Colonial Ice Cream, Breyers' Ice Cream Co., Produce Exchange and the Inter-State Milk Producers' Assn. and Philadelphia Inter-State Dairy Council in Philadelphia. At the latter point addresses were made by H. D. Allebach, president of the Producers' Association and by C. I. Cohoe, director of the Quality Control Department of the Dairy Council.

The New York visit included trips to the plants of the Sheffield Farms, Borden Milk Co., Reid Ice Cream Co. and the Dairymen's League, in New York City, and to plants of the Breyer Ice Cream Co. and the Hydrox Ice Cream Co. at Long Island City, N. Y.

DO NOT PASTURE TOO SOON

Dairy cattle cows or young stock, should not be turned out to pasture until the ground is settled and the grass well-started. Better pastures all summer and much more feed all summer will be realized from later starting.

MARKET CONDITIONS In the Philadelphia Milk Shed During April

With the approach of spring comes the usual advance in milk production. Through a combination of circumstances, probably the early season, and probably from the disposition to take advantage of the present prices, the customary spring flush has started in somewhat earlier than usual.

In some instances the supply of basic milk has advanced above the current demand, which condition is about a month in advance of the usual custom.

While the season of garlic and other objectional flavors in milk is at hand, there has been less complaint than usual. With the exception of some of the more southerly districts, garlic flavors have been pretty well taken care of by producers. In practically every case dealers refuse to accept milk that has garlic or any other off flavors as it is unsalable in this market.

Taken as a whole the market for fluid milk has been dull, as might be generally expected at this season of the year.

April Market Prices

Grade B market milk, three per cent butter fat content (basic quantity average) delivered F. O. B. Philadelphia, during April is quoted at \$3.29 per hundred pounds.

The price of basic milk, (basic quantity average) three per cent butter fat content, delivered at Receiving Stations in the 51-60 mile zone, during April is quoted at \$2.71 per hundred pounds, the usual butter fat differentials and freight rate variations applying at other mileage points in the territory, as shown by quotations on page 5, of this issue of the Review.

The price for Class I surplus milk for April, three per cent butter fat content, at all receiving stations is \$2.03 per hundred pounds. For F. O. B. Philadelphia delivery this price is quoted at \$2.60 per hundred or 5.6 cents per quart.

The price for Class II Surplus for April, three per cent butter fat content at all receiving stations, was \$1.62 per hundred pounds. The Philadelphia

price is quoted at \$2.19 per hundred pounds or 4.7 cents per quart.

Feeds

There have been few major changes in the Feed Market during April. A decline in the price of the high protein feeds coupled with a similar decline in the price of cottonseed is to be noted. Gluten feed in particular showed weakness, declining \$3.00 in some markets. Corn feeds remain stationary and at about the same price level as last month.

Bran has been stationary in price. Hay has declined in price. Practically all grades shared in the decline, which averaged about \$1.00 a ton on the various grades.

April Butter Prices

Prices during the month have shown wide fluctuations. Market conditions ruled from extreme firmness to extreme weakness. Fluctuations in the domestic supply or heavy importations resulted in sharp fluctuations from day to day. The sensitive conditions of the market however is not unusual at this season, but the situation has been more or less influenced by the small stocks of butter in storage.

Production on the whole has been increasing and a further increase is anticipated. Foreign receipts early in the month were heavy but decreased as the month advanced.

Storage stocks in the United States on April 23rd were estimated at 2,741,000 pounds as compared with 17,000,000 pounds a year ago.

The price of 92 score butter, New York City opened the month at 50 cents, on April 13th it had advanced to 53 cents, dropping however to 51½ cents the next day, and then recovered in a few days to 54 cents. In a few days it had again declined to 50 cents, climbing to 51 cents and dropping at the end of the month to 45 cents. These sharp fluctuations have resulted in an extremely unsettled general market.

The average price of 92 score butter, New York City on which April surplus prices were computed was, 5117 cents per pound as compared to 4978 cents one month ago.

The price for Class II Surplus for April, three per cent butter fat content at all receiving stations, was \$1.62 per hundred pounds. The Philadelphia

REPORT OF THE QUALITY CONTROL DEPARTMENT OF THE PHILADELPHIA INTER-STATE DAIRY COUNCIL

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of March, 1927.

No. Inspections Made... 1188
No. Sediment Tests... 2858
No. Meetings Held... 28
No. Reels of Movies

Shown 5
Attendance 4941
No. Miles Traveled... 13927
No. Man Days, Fairs and Exhibits 7½

No. Temp. Permits issued up to March 31, 1927... 21267
No. Perm. Permits issued up to March 31, 1927... 9153

During the month 83 dairies were discontinued from selling for failure to comply with the regulations—24 of which were reinstated before the month was up. To date 68817 farm inspections have been made.

MILK PRODUCERS' ASSN. DIRECTORS TO MEET

The regular bi-monthly meeting of the Board of Directors of the Inter-State Milk Producers' Association will be held at its offices in the Boyertown Building, Philadelphia, on Thursday, May 12th, at ten o'clock Standard Time.

General current business matters will be considered.

MAKES WORK EASIER

Using cotton disc strainers is advisable in the production of clean milk. They do not need scalding every day as the strainer cloth does, since the disc is used once and then discarded. If strainer cloths are now being used, the change to cotton discs will make the work of the housewife—who, in most cases, takes care of the dairy dishes—much easier.

PREVENT FOREST FIRES

Fire is the great enemy of the forest. It injures or destroys timber, kills the young trees, burns the plant food in the forest floor, causes the soil to wash, dries up the streams, runs out the game and ruins the forest camping places.

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN

The basic price quoted below for April, 1927, is to be paid by cooperating dealers on the average basic quantity established by each producer. For all milk bought in excess of the basic amount, the surplus prices quoted below for the month of April are to be paid. Beginning with January the basic quantity will be established by using the higher average basic quantity established in October, November and December of either 1925 or 1926.

These quotations are based on 3% butterfat milk and a differential of 4 cents for each tenth point and 2 cents for each half tenth point up or down and are for all railroad points. (Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES

This price list is issued with the understanding it is net to the producers and that all buyers using it as a basis of payment to producers, shall in addition thereto make the following contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk purchased from any producer at price listed hereon.

(2) To the Inter-State Milk Producers Association 2c per 100 pounds (46½ quarts) of all milk bought from members of said Association.

(3) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk bought from other producers at price listed hereon.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets, and for an educational campaign advertising the food value of dairy products.

BASIC PRICE		BASIC PRICE	
April		April	
F. O. B. Philadelphia		Country Receiving Stations	
GRADE B MARKET MILK		GRADE B MARKET MILK	
Test per cent.	Price per qt.	Test per cent.	Price per qt.
3.0	\$3.29	3.0	\$2.71
3.1	3.31	3.1	2.73
3.2	3.33	3.2	2.75
3.3	3.35	3.3	2.77
3.4	3.37	3.4	2.79
3.5	3.39	3.5	2.81
3.6	3.41	3.6	2.83
3.7	3.43	3.7	2.85
3.8	3.45	3.8	2.87
3.9	3.47	3.9	2.89
4.0	3.49	4.0	2.91
4.1	3.51	4.1	2.93
4.2	3.53	4.2	2.95
4.3	3.55	4.3	2.97
4.4	3.57	4.4	2.99
4.5	3.59	4.5	3.01
4.6	3.61	4.6	3.03
4.7	3.63	4.7	3.05
4.8	3.65	4.8	3.07
4.9	3.67	4.9	3.09
5.0	3.69	5.0	3.11
5.1	3.71	5.1	3.13
5.2	3.73	5.2	3.15
5.3	3.75	5.3	3.17
5.4	3.77	5.4	3.19
5.5	3.79	5.5	3.21
5.6	3.81	5.6	3.23
5.7	3.83	5.7	3.25
5.8	3.85	5.8	3.27
5.9	3.87	5.9	3.29
6.0	3.89	6.0	3.31
6.1	3.91	6.1	3.33
6.2	3.93	6.2	3.35
6.3	3.95	6.3	3.37
6.4	3.97	6.4	3.39
6.5	3.99	6.5	3.41
6.6	4.01	6.6	3.43
6.7	4.03	6.7	3.45
6.8	4.05	6.8	3.47
6.9	4.07	6.9	3.49
7.0	4.09	7.0	3.51

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

APRIL SURPLUS PRICE		APRIL SURPLUS PRICE	
F. O. B. Philadelphia		F. O. B. Philadelphia	
Test per cent.	Price per qt.	Test per cent.	Price per qt.
3.0	\$2.03	3.0	\$1.62
3.1	2.05	3.1	1.64
3.2	2.07	3.2	1.66
3.3	2.09	3.3	1.68
3.4	2.11	3.4	1.70
3.5	2.13	3.5	1.72
3.6	2.15	3.6	1.74
3.7	2.17	3.7	1.76
3.8	2.19	3.8	1.78
3.9	2.21	3.9	1.80
4.0	2.23	4.0	1.82
4.1	2.25	4.1	1.84
4.2	2.27	4.2	1.86
4.3	2.29	4.3	1.88
4.4	2.31	4.4	1.90
4.5	2.33	4.5	1.92
4.6	2.35	4.6	1.94
4.7	2.37	4.7	1.96
4.8	2.39	4.8	1.98
4.9	2.41	4.9	2.00
5.0	2.43	5.0	2.02
5.1	2.45	5.1	2.04
5.2	2.47	5.2	2.06
5.3	2.49	5.3	2.08
5.4	2.51	5.4	2.10
5.5	2.53	5.5	2.12
5.6	2.55	5.6	2.14
5.7	2.57	5.7	2.16
5.8	2.59	5.8	2.18
5.9	2.61	5.9	2.20
6.0	2.63	6.0	2.22
6.1	2.65	6.1	2.24
6.2	2.67	6.2	2.26
6.3	2.69	6.3	2.28
6.4	2.71	6.4	2.30
6.5	2.73	6.5	2.32
6.6	2.75	6.6	2.34
6.7	2.77	6.7	2.36
6.8	2.79	6.8	2.38
6.9	2.81	6.9	2.40
7.0	2.83	7.0	2.42

MONTHLY BASIC PRICES OF GRADE B OR MARKET MILK		MONTHLY BASIC PRICES OF GRADE B OR MARKET MILK	
1926		1927	
Month	Price per qt.	Month	Price per qt.
January	2.15	January	2.71
February	2.17	February	2.73
March	2.19	March	2.75
April	2.21	April	2.77
May	2.23	May	2.79
June	2.25	June	2.81
July	2.27	July	2.83
August	2.29	August	2.85
September	2.31	September	2.87
October	2.33	October	2.89
November	2.35	November	2.91
December	2.37	December	2.93
1927		1927	
January	2.37	January	2.71
February	2.43	February	2.73
March	2.49	March	2.75
April	2.55	April	2.77

MAY PRICES
Inter-State Milk Producers' Association
The price paid for basic milk during May, will subject to market conditions, be the same price as quoted above for April, 1927. The basic quantity will be established by using the higher of the 1925 or 1926 established basic amounts. First surplus milk, in amount equal to the basic quantity, will be paid for on the basis of 92 score solid packed butter for the month at New York City, plus 20 per cent. Second surplus milk, represented by the amount in excess of the first surplus will be paid for on a flat 92 score butter price for the month at New York City.

APRIL BUTTER PRICES		APRIL BUTTER PRICES	
92 Score Solid Packed		92 Score Solid Packed	
Philadelphia	New York	Philadelphia	New York
1	51	1	50
2	51	2	50
3	51	3	50
4	51	4	50
5	51	5	50
6	51	6	50
7	51	7	50
8	51	8	50
9	51	9	50
10	51	10	50
11	51	11	50
12	51	12	50
13	51	13	50
14	51	14	50
15	51	15	50
16	51	16	50
17	51	17	50
18	51	18	50
19	51	19	50
20	51	20	50
21	51	21	50
22	51	22	50
23	51	23	50
24	51	24	50
25	51	25	50
26	51	26	50
27	51	27	50
28	51	28	50
29	51	29	50
30	51	30	50

STATE COLLEGE LOSSES

FARM SUPERINTENDENT

After serving for 17 years as superintendent of farms, at the Pennsylvania State College, C. L. Goodling has resigned to become director of the National Farm School, in Bucks county, Pennsylvania. His loss to the School of Agriculture will be felt keenly, for Mr. Goodling's record there has been an enviable one. When he took charge of the college farms in 1910 there were but 400 acres of farm land



At Our Risk

Dr. Clark's PURITY Milk Strainer is the only strainer on the market that is guaranteed to remove all the dust, dirt and sediment from your milk. Unless milk is clean, it won't test Grade "A" regardless of the percentage of butter fat—that's why thousands of farmers and dairymen who use PURITY strainers get more money for their milk. Dr. Clark's Purity Strainer is simple to use—strains quickly and is easy to clean, saves time—saves labor—insures absolutely clean milk. Made in two sizes—10 qt. and 18 qt. Sold by good dealers everywhere.

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Send us your name and address and we will send you descriptive literature and full particulars of our "10 Day Test Offer"—an offer that enables you to prove the value of PURITY strainers with a money back guarantee if it fails to do all we claim for it. Write today.

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Easy payments if desired.

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EXEMPTS CORN IN CRIB

Some farmers in the corn borer clean-up area are wondering what they must do with corn in the crib. Must it be fed or destroyed?

Federal and State authorities have agreed that the immediate danger of corn borer spread from corn in the crib, at least so far as Pennsylvania is concerned, is so slight that requiring the complete destruction or utilization of the crib corn this spring is not warranted. Therefore, corn in the crib is not subject to the requirements of the clean-up regulations.

However, in commenting on this, C. R. Hadley, director, Bureau of Plant Industry, State Department of Agriculture, says, "As a matter of general policy, I think it is advisable that crib corn be used if at all possible by the time when the corn borer moths begin to emerge early in June, although we do not feel it necessary to make this an absolute requirement for this season at least."

HEALTH DRAMATIC DEPARTMENT PHILADELPHIA INTER-STATE DAIRY COUNCIL. THE SCOPE OF A YEAR'S WORK

During the early stages the dramatic program offered by the Philadelphia Inter-State Dairy Council was given a thorough trial in the public schools. After seeing the presentations school authorities acknowledged they presented a most delightful and valuable lesson in inspiring children to develop health habits.

A play for school children called "The Milk Fairies" portraying the importance of milk in the diet, was obtained through the National Dairy Council.

In March, 1921, the Walton School in Philadelphia under the principal, Miss Helen K. Yerkes, demonstrated the versatility of this first Dairy Council play when the school staged a "Food Forum". An adaptation of the "Milk Fairy" play was given by the children with milk songs written by one of the teachers and sung by the Glee Club.

The "Milk Fairy" play closed its first school season on June 20th with a performance in the Egyptian Hall of the John Wanamaker Store before the Wanamaker Institute and employees. The cast was from the Furness Public School.

During the first summer the playlet was given in all the Philadelphia school playgrounds.

Dramatic Organization

In October, 1921, Del Rose Macan took charge of the health dramatic work. The department was reorganized and enlarged to meet the increasing demands for its work.

The first month after the reorganization there were four casts rehearsing, and a number of performances given with the same casts, reaching 8,600. After the first few weeks of rehearsing the play in four one-hour rehearsals, the work became more and more efficient, gaining the enthusiastic support of principals and faculty of schools in which the plays were given.

In that year one cast was used over and over, repeating the play in several schools. It was then realized that although this procedure simplified the work, it did not make the lasting impression nor did it receive as much interest from the schools where it came as a visitor—as when the children were trained in each school.

The cooperation of the Board of Education through the Associate Superintendent, Dr. A. J. Gerson, gave the Council the opportunity to extend the play message to all of the available schools.

The Stanley Theatres of Philadelphia were placed at the disposal of the Dairy Council for morning performances. These large auditoriums enabled the department to give the plays to larger audiences than was possible in most of the school assembly rooms.

In connection with the addition of a colored worker to the Dairy Council Staff to conduct food demonstrations and plays with colored groups, a number of meetings were held where a play was presented to a total of two thousand colored school children.

Message Broadened

New plays were written and rehearsed during the summer of 1922. A demonstration of this material in the Botanical Gardens of the University of Pennsylvania in the early part of September to a representative group of educators, Dairy Council contributors, members of health and social organizations, was received by them with enthusiasm.

The new dramatic material included "How Milk is Made", "Following the Milk Can", "Eating Milk", and "Milk for the Whole World", ten minute plays for third and fourth grade school children; "Making the World Fit", a twenty minute play for seventh and eighth grade boys and girls as well as high school girls, which teaches a lesson in nutrition; "Happy's Vanity Case", a monologue on "Inside Paint", and "The Garden of Hours", a play portraying the "Rules of Health" in pageantry for girls of high school age.

Health Stories

Object talks such as "David" emphasized by the use of dolls, toy furniture, toy foods, masks and other objects have proven effective in teaching children, especially those very young. Teachers frequently used them as a basis for the regular health lessons.

In connection with the rural meetings of the Inter-State Dairy Council, and the Inter-State Milk Producers' Association, the Dramatic Department was first called upon in 1922 to furnish plays and monologues.

A performance of the "Garden of Hours", given in the auditorium of the Germantown High School in February, 1923, marked the entry of the Dairy Council dramatics into the high school's

During the sessions of the Pennsylvania State Dental Society held May 17th and 18th, 1923, at the Bellevue Stratford, Philadelphia, the Dramatic Department staged a performance on two successive days of a new play adapted by the Colgate Company called "Who Said Six Year Molars?" The audience was composed of dentists from all parts of the State.

Trenton, N. J., Program

In 1923, a program was initiated in the Trenton, N. J., schools under the direct supervision of the Board of Education. Four lessons were given, including, "The Rules of the Game", "The Food Fairies", the "Story of Teeth", and "Cleanliness". Each lesson bore in some way on one or all of the other three. Supplementary to the school work in Trenton, many meetings of parents and teachers were held at which times nutrition and health talks were given.

Health Circus

The addition of the "Health Circus" to the plays offered by the Department resulted in its becoming one of the most popular. The play was given in city and country by all kinds of groups of boys. It was found equally satisfactory in other Dairy Council units. Prior to this there was no health play for boys of junior high school age. It was given before a large group of farmers at the Farm Products Show at Harrisburg.

Other plays have been prepared and put into general use. A playlet called "Health in Toyland" furnishes a lesson for the very small children; "The Scarecrow", a play for high and junior high school girls filled the same needs with girls as the "Health Circus" with boys.

Demonstrations for Teacher-Training Institutions

Regular programs, demonstrating the work of the Dairy Council and the dramatic and nutritional material which it offers to teachers have been conducted in a number of normal schools, universities, and teacher training schools.

Dramatic and Nutrition Departments united in presenting the message of the work of the Dairy Council to these educational groups. Training teachers

in the presentation methods of the dramatic material became one of the most important means of extending the Dairy Council message. A growing appreciation of dramatics in health education as an example of the type of endeavor in teaching the public was evidenced by students from an Applied Science Class who came in to the Dairy Council offices Saturday mornings to see demonstrations of "A Trip to Healthland". The students then made their own illustrative material and told the stories to children in the Practice School.

The value of the work of the Dramatic Department was best illustrated in the spring of 1926 with a presentation of the "Masque of Beauty Through the Ages" by the Harding Junior High School, Philadelphia. This was developed as a project by the school, every department cooperating in the preparation of material, the training of the cast, and its presentation to the community on four successive evenings. The Dairy Council cooperated in the preparation of this, the first health pageant or masque yet produced for high and junior high school use. It was written by Charles Sommers, the author of the "Health Circus", "The Scarecrow", the "Garden of Hours", and other Dairy Council plays.

Methods of Production

Through the detailed system of production it is possible for the Health Dramatic Staff of the Dairy Council to reach a large and otherwise inaccessible group. Plays contain a wide range of adaptability. In the variety of plays something suitable may be found for every school grade.

To be of real service, schedules must be accommodated to school programs. It was found that the period immediately following dismissal of school was the most satisfactory for rehearsals of plays.

Plays requiring four rehearsals are usually scheduled to rehearse on four consecutive days. A minimum of time is consumed by avoiding week-end intervals. In having one rehearsal follow another the enthusiasm and interest of the children is held, and the training of the preceding day remains fresh in their minds.

There must be definite limitation to time spent in school—with arrangements made in advance. One member of the Dramatic Staff takes entire detail charge of costumes, keeping them mended and in perfect order. They are made of good material and frequently laundered.

Plays Used Without Director

- Four Short Plays:
1. How Milk is Made—Schools—lower grade.
 2. Following the Milk Can—Schools—lower grade.
 3. Eating Milk—Schools—lower grade.
 4. Milk for the Whole World—Schools—lower grade.

Who Says Six Year Molars?—5th Grade.

Health in Toyland—1st and 3rd grades.

Plays in Constant Use (Directed)

1. Garden of Hours—High Schools, Women's Clubs, Demonstrations in Normal Schools, etc.
2. Health Circus—Junior High Schools—Parent-Teacher Associations.
3. Scarecrow—For the higher grades of schools.
4. Making the World Fit—Grades and Junior High.
5. Magic Street—5th grade children—Junior High.
6. Fashion Show—Junior High—High—Clubs.
7. Health in Toyland—1st and 3rd grades.

Dramatic Department Statistics

Attendance	Children	Adults
1922-1923.....	165,897	7,130
1923-1924.....	332,738	
1924-1925.....	369,433	
1925-1926.....	367,643	8,592



Walker-Gordon Laboratory Co.
Milk.

PLAINSBORO, N. J. July 7, 1926.

Standard Oil Co. (New Jersey)
26 Broadway,
New York City.

Dear Sirs:

We used Flit for exterminating flies last season with excellent results. By cleaning up fly breeding places, the use of suitable traps outside of the buildings and the spraying of Flit inside the dairy barns, we were able to control the flies very successfully. We began the use of traps and spray this year on July 1st.

The control of flies on a dairy farm, or any other place, is a matter of sanitation. It is of economic value for a cow to be free of the annoyance of flies. Contaminated cows will give increased production.

Sincerely yours,
WALKER-GORDON LABORATORY COMPANY
Mr. Jeffers
President.

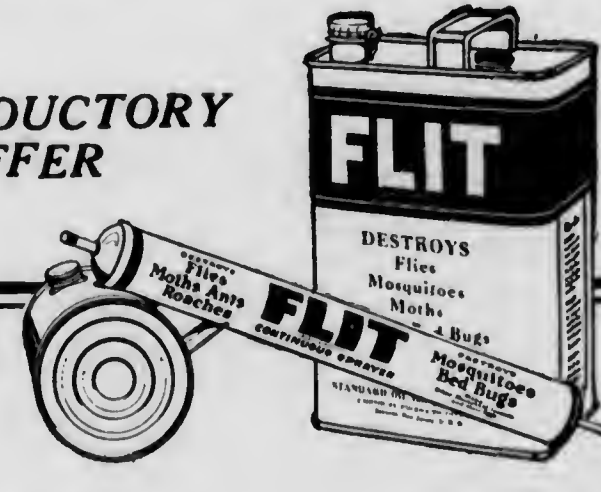
Above is a general view of the milking stables of the Walker-Gordon Laboratories, Plainsboro, N. J.; the illustration shows the method of spraying Flit. A power air-pressure machine is used, the spray nozzle producing a very fine vapor.

Flit is used daily in both the milking barns and milk bottling plant. After sun-down Flit is sprayed toward the ceiling of the barns, where flies usually rest. This method quickly kills all flies. The same plan is also followed each night in milk bottling plant. Flit is non-poisonous—harmless to man and beast, but fatal to insects.

PLAY FAIR WITH YOUR COWS!

CONTENTED cows! More milk!
Leading dairies in every section now daily spray Flit to rid their premises of disease bearing, annoying flies. If you have never tried Flit—send today for the facts and try it out in your own plant. Be sure to get Flit. Accept no substitute.

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Send me further facts regarding use of Flit in dairies. Also special introductory offer to dairies.

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PUTTING DOWN EGGS FOR THE WINTER

At this season of the year when eggs are plentiful and marketing prices low, and when market buyers store large quantities in cold storage, it might be of advantage to the egg producer to follow the same practice and put down a quantity of eggs for winter use.

Many methods of home preserving have been used, such as packing eggs in dry table salt, sawdust, bran, oats or dry wood ashes, but the two most successful ways are the water glass and the lime water and salt methods. The water glass method usually gives the better results, because of the chalky taste that can be detected in eggs preserved with the lime water and salt solutions.

Eggs preserved by these methods when opened usually have a characteristic pink albumen. The albumen is also rather watery. The yolk is flattened and is also somewhat darker in color. The eggs should be normal in flavor and odor and can be used very well for cooking purposes.

The water-glass preservative is prepared as follows:

Mix one and one-half quarts of commercial water-glass solution with 18 quarts of pure water; water that has been boiled is preferable. Stir the mixture until the ingredients are thoroughly mixed. An earthen jar is the most suitable vessel for the mixture, although a tight odorless tub may be satisfactory. Two eight-gallon jars are sufficient for thirty dozen eggs, using the quantity of solution prescribed above. After the water-glass is thoroughly mixed, pour it in the vessels. If more water is needed to cover the eggs sufficiently, this may be safely added to the amount of five quarts.

Lime Water and Salt

Slake 4 pounds of good quicklime in a small quantity of water, then mix with four gallons of pure water and add two pounds of salt. Stir the mixture thoroughly and allow it to settle. The clear liquid poured off is the part in which the eggs are to be preserved. This mixture should be sufficient to preserve thirty dozen of eggs, the number varying with the shape of the vessel in which they are placed.

ONE, TWO, THREE

Out of the earth come good things,
And out of the sky, the sun;
And out of the clock the minutes
Come one,
By one,
By one.

Out of the day the night comes,
And out of the darkening blue
The twink-a-ling red and gold stars
Come two,
By two,
By two.

Out of the east the dawn comes
And the birds come out of the trees;
And out of the distance, milkmen
Come three,
By three,
By three.

Robin Christopher.

GOOD SENSE NOT LAZINESS

It's no disgrace to take fifteen minutes in the middle of a busy morning or afternoon and deliberately forget about housework. To sit and visit or to lie down and relax for a short time is not a sign of laziness but a sign of good sense. The woman who knows enough to rest before getting completely exhausted is the one who can "carry on" the longest. Such a fifteen minutes out of the work-day, even when dusting, darning, or dishes are waiting to be done, may prove a sound investment. The renewed vigor with which household duties may be attacked, and the peace of mind given by this "time to think", makes the rest of the work seem easier and is more likely to leave the homemaker in a cheerful mood to greet her family at the end of the day.



THE "BETTER HEALTH" CLUB MEMBERS ARE SALESMEN FOR MILK IN NEW JERSEY SCHOOL

The "Better Health" Club of the Whittier School, Camden, New Jersey, recently needed money to purchase a basketball. It was proposed by some of the members that the funds be secured through the sale of hot dogs and candy! These two articles may have their use and their place, but it would have been a lost opportunity for the Health Club to sponsor such sales when these colored boys and girls at each of their monthly meetings were advocating "More milk, fruit and vegetables."

So it seemed to Mrs. Madeline Tillman of the Nutrition Department of the Dairy Council who had presented "Foreign Diets", "Dairying in Foreign Lands," "Pep," "David," and a number of other Dairy Council talks to different grades in the school and who was particularly interested in encouraging the Health Club.

A consultation was held with the teachers and with the club members, suggesting instead of the proposed hot dogs and candy that the club sponsor the sale of milk and sandwiches. The profits were to be derived from the sandwiches. This new arrangement was received with enthusiasm and shortly put into effect.

The "Better Health" Club of one hun-

WHAT KIND OF A HOME?

Some of us know of homes which are always in order; where no tell-tale dust ever hides in the corners and crevices; where meals are served on the dot, and everything moves in a strictly efficient manner. We look with envy at the housewives who manage such homes, but is our feeling always justified? Homes are for people, not things. A home which has to be kept too neat to permit children to play in it or which makes guests feel as if they have to put down newspapers to walk comfortably, has degenerated into a mere house. Children who rejoice to come home, who bring in their playmates and know they will be welcomed, live in a true home even though dinners may be late occasionally. The home that cannot make a guest feel at ease lacks the right atmosphere, no matter how spick and span it may be.

SUGGESTIONS TO TEMPT THE FAMILY'S APPETITE AT THIS SEASON

Rhubarb Pie

3 cups rhubarb
1½ cups sugar
1 egg
2 tablespoons flour

Skin and cut stalks of rhubarb in half inch pieces before measuring. Mix sugar, flour and egg; add to rhubarb and bake between crusts.

Baked Rhubarb

If you usually stew rhubarb try this method. Cut into inch pieces and remove the stringy peel. Cook in the oven, in a glass or earthen casserole dish, until it is soft, adding just enough sugar to sweeten.

Rhubarb Shortcake

Place two cups of flour in a bowl and add

1 teaspoon salt
4 teaspoons baking powder
1-3 cup sugar

Sift to mix then rub in six tablespoons of shortening. Mix to a dough with two-thirds cup of milk. Cut with a large cookie cutter and bake in a hot oven for fifteen minutes. Split and butter and then serve with the cooked rhubarb. This is good served hot.

Berry Pudding

1 egg
2 tablespoons sugar
1 tablespoon butter
1-2 cup milk
2 teaspoons baking powder
Flour enough to make it like cup cake.

Mix in the order given and add floured fruit last. Bake about 40 minutes. Serve hot with sugar and cream.

This pudding is delicious made with unseeded pie cherries.

Try it later in the season with blackberries or huckleberries.

Asparagus Soup

Cut the asparagus into 1-2 inch length pieces, boil until tender in salted water. Add 1 quart good rich milk or part cream, 2 ounces butter, season with a little pepper, and it is ready to serve.

This soup is especially tasty when the family begins to tire of asparagus on toast. Or is a very attractive way to piece out the first cuttings that may not be enough to "go around" served on toast or with drawn butter.

Mint Sauce

Now that the spearmint and pepper mint are sending up tender shoots try some mint sauce with your Sunday roast lamb.

1-4 cup finely chopped mint leaves
1-2 cup vinegar
1 tablespoon powdered sugar

Add sugar to vinegar; when dissolved, pour over mint and let stand thirty minutes on back of range to infuse. If vinegar is very strong, dilute with water.

A coat of paint on some of the old furniture in the attic may make it just right for the porch.

LIFE'S FASHION SHOW DEPENDS ON HEALTH FOR BEAUTY, SHE SAYS

Life itself is nothing more than a glorious fashion show, says Miss Gladys Coon, of the National Dairy Council. We go to school that we may clothe ourselves with the garments of learning. On the crowded avenue we meet someone who particularly catches our eye. Ah! That lady is beautifully dressed, we say, but is it the dress alone that strikes our fancy? No, on second thought you will find that this lady is clothed in something more than style—she wears the robe of health—a clear skin, bright eyes, grace, poise, and a subtle effluence of happiness.

We study the rules of wholesome living that we may clothe ourselves inside and out with radiant, robust health, Miss Coon believes. Slowly and surely a new elegance, a more feminine elegance, is approaching for the women of America. We are coming to realize what an important part health plays in this fashion show of life.

"Look to healthland for your inspiration. Then, if you wish, turn to Paris or New York for the necessary frills and ruffles. Healthland decrees that simplicity shall be the keynote of the modern vogue. Straight lines are the smartest for they compel their wearer to watch her carriage, her walk, the tilt of her head. The new variation of the silhouette is vigorous and somewhat athletic but nevertheless sophisticated and blithesomely feminine. Slouches and curves are tout a fait passe. Too many sweet and pastry ornaments are as out of place as an overabundance of jewelry. They completely detract from the rest of the dress."

To be trim and healthy, American women are admonished to watch more closely the internal care of their bodies, upon which to drape the beautiful gowns which add the finishing touches to natural health. Make sure that you have green leafy vegetables or fruit in a salad each day. Milk, which contains an abundance of calcium, necessary for development of pearly teeth and rosy complexions, should be a necessary part of each day's meals.

WHO SAYS DAIRY COW IS NOT NECESSARY TO HUMAN RACE?

Madam Dairy Cow would not recognize her own kind nowadays if she were permitted to take a trip through some of the modern factories where by-products from her lacteal secretion are being made into all manner of more or less useful products for the invented needs of man.

Herbert Hoover claims that the human race could not survive without the products of the dairy cow. When he made such a statement he was thinking of milk, butter, ice cream and cheese. He did not realize how many other products this humble creature of the green pastures and shady hillsides is supplying, say officials of the National Dairy Council.

For instance, among other things, milk by-products are being used in the manufacture of glue, paints, plastic masses, fork handles, ferrules for umbrellas, printing calico, in waterproofing and "loading" silk, in the manufacture of foodstuffs, medicinal preparations, photographic plates, toilet soaps, poultry feeds, shoe polish, in priming canvas and in treating pulp board covering as well as many other articles.



You can't compare FEEDS unless you compare RESULTS!



No amount of figuring with pencil and paper will tell you just how good a dairy ration is.

Study of a formula may give you a general idea about the protein, fats, minerals, etc., a feed contains, but the big thing is, "what will it show in the milk pail?"—and an actual test is the only way to answer that question.

You never can say truly that a feed is "good" or "poor" unless you speak in terms of results. A feed is never "high priced" or "low priced" unless the amount of milk it produces is taken into consideration. You can't compare either feeds or prices on any other basis.

The unchanging Larro formula was developed with results in mind, and many exclusive manufacturing processes keep Larro always the same. Because of this, we have been able to offer continuously since 1912 our guarantee, which allows you to feed two bags of Larro to any cow and get your money back if you are not satisfied with results.

Ask the Nearest Dealer

THE LARROWE MILLING COMPANY
DETROIT MICHIGAN



(540)

Larro

The SAFE Ration for Dairy Cows
Also a complete line of poultry feeds—as good for your chickens as our dairy feed is for your cows.

Feed two bags
under our
Guarantee



More Milk Or It Costs You Nothing
"Feed 200 pounds of Larro to any cow; then if your own figures do not show that she gave more milk on Larro, or if for any other reason you are not entirely satisfied, return your two empty sacks and get your money back."
Dealers selling Larro are authorized to carry out the terms of this agreement.

DAIRY COUNCIL SERVICE

The various departments of the Dairy Council are at your service and will assist you in planning

Educational Entertainment

for your Community, Local or Club Meetings.

Philadelphia Inter-State Dairy Council

R. W. BALDERSTON, Secretary
BOYERTOWN BUILDING
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PHILADELPHIA

McCormick Deering Corn Planters



A Great Combination of Time Proved Features

The McCormick-Deering planters combine oldtime-proved principles with the simplified design, which insures greater accuracy and a wider range of adaptability to the different requirements. It has taken a number of years to perfect this combination. The result is a series of planters which have no untried features. Their superiority lies in the manner in which these proved principles are combined and applied.

International Harvester Co. of America, Incorporated

Philadelphia Harrisburg Baltimore

ESCO MILK COOLING BOX

Keep Your Milk
below 50 degrees



Make Low
Bacteria counts
—increase profits

We furnish either the complete outfit or just the cooling unit installed in your own concrete cooling box. Full specifications and price sent on request.

Eastern Sales Company, Distributors
140 East Market Street West Chester, Pa.

TAKE CARE OF FRESH COW

Cows about to freshen should be given special care and attention. A mash made with hot water and wheat bran to which a little salt has been added is excellent just before and after freshening. Feed the mash at blood temperature. For at least a day after freshening give only warm water to drink.

SPEAKING OF LONG NAMES

A policeman caught a Welsh motorist exceeding the speed limit. "Your name, please?" he demanded. "Aubrey Llewellyn Brynmor Af Llwyll," was the reply.

The officer put his notebook away and looked sternly at the offender.

"Well, don't let me catch you again," he said.

DAIRY INDUSTRY CONFERENCE WASHINGTON, D. C.

(Continued from page 1)

and compared the sizes of the vital organs of some noted cows in this study. Dr. Graves followed with a demonstration of the various groups of dairy cattle under experiment at the Station.

The cattle were paraded in order of their respective development and involved cows and bulls of the Holstein-Friesian and Jersey breeds.

A dairy luncheon followed which was served in one of the dairy barns.

Following the luncheon, Dr. Meigs, of the Animal Nutrition Department, made an interesting address in which the calcium and phosphate requirements of the dairy cows were discussed.

Dr. Miller briefly outlined the experimental work which has been carried on

Wednesday's Meeting

The day's sessions were given over to demonstrations of the work being done by the Bureau of Dairying and the Bureau of Agricultural Economics.

In the morning session addresses were made by Edward Kelly, on Market, Milk and Dairy Sanitation; Mr. Fausen on Sterilization for the Prevention of Bacterial Growth; C. S. Leet, on Bacterial Control, Important Factors of Milk Marketing; Mr. MacDonald, on a Better Sires Program; J. B. Parker, on Cow Testing Association Work; Wm. White on Activity in Milk and Cream; Alan Leyton on the Physical Processes of Ice Cream Viscosity and Freezing; Dr. Holme, Milk Powder and Its Effect in Baking; Mr. Meyers on the



Exercising the Test Bulls, Beltsville Experiment Farms, Beltsville, Md.

in connection with the use of sprouted oats in the study of reproduction in dairy animals, while Thomas Woodward, in charge of the Beltsville Farm, outlined the development, progress and operation of the general farm crops in connection with the Beltsville Station.

A visit to the Quarantine Farm, at the Beltsville Station, was also made. Here are kept, isolated from the general herd, the cows and bulls that have reacted to the test for Bovine Contagious Abortion, and a very comprehensive study of both cows and bulls is being conducted.

Tuesday Evening Session

The session on Tuesday evening was held in the Auditorium of the New National Museum. The meeting was in charge of Assistant Secretary of Agriculture, R. W. Dunlap, who briefly outlined the development and increase of the departmental work. He referred particularly to the heavy losses due to the prevalence of contagious abortion.

Dr. A. F. Woods, Chief of Research Department, outlined the work of the Department, while Dr. Fertig, of the Bureau of Animal Industry, made an address on the development of the work of eradicating contagious Bovine Tuberculosis.

Department motion pictures shown included a very complete presentation of the ravages of the European Corn Borer; Milk for You, and a film showing Roads of the National Parks.

Production of Swiss and Roquefort Cheese, and Dr. Belt on the Utilization of Whey.

Luncheon

The following luncheon, prepared by the employees of the Laboratories of the Bureau of Dairying, was served the visitors:

Swiss-Cheese Sandwiches

The bread was made in our baking laboratory using 4 per cent. skim-milk powder made by a process developed in the laboratory which insures proper volume and texture.

The butter was made in the Grove City Creamery by the sweet-cream method developed in the laboratory.

The Swiss Cheese was made in the laboratory using the clarification and pure-culture method developed in the laboratory.

Cottage-Cheese Salad

The cottage cheese was made in the laboratory. The basis of the dressing is a concentrated sour skim-milk made by a method developed in the laboratory. All recipes in which this product is used are the result of tests made in our baking laboratory.

Waffles With Maple Syrup

The waffles are made with concentrated sour skim-milk.

Ice Cream

Made in the laboratory using cream produced on the Beltsville Farm.

(Continued on page 15)

MONTGOMERY COUNTY COW TESTING ASSOCIATION

Compiled by F. E. Martin, Tester; R. G. Waltz, County Agent

During the month of February 24 herds were tested having 340 cows in milk and 43 cows dry. Eight unprofitable cows were disposed of. Fifty-five cows produced over 40 pounds of fat and those producing more than 50 pounds were 22. Eighty-nine cows produced more than 1,000 pounds of milk, while 44 cows produced more than 1,200 pounds.

Highest herd average milk production:

Owner	Breed	Cows in herd	Average Lbs. Milk
Landis, Wm. H.	Holstein	21	1210*
Longacre, C. E.	Holstein	15	905
Schultz Est., Levi	Holstein	14	896
Ursinus College	Holstein	15	895*

Highest herd average butterfat production:

Owner	Breed	Cows in herd	Average Lbs. Fat
Landis, Wm. H.	Holstein	21	40.6*
Ursinus College	Holstein	15	34.2*
Schultz Est., Levi	Holstein	14	31.5
Longacre, C. E.	Holstein	15	31.2

Honor Cows Producing 40 Lbs. of Fat or More During Month

Owner	Name & Breed of Cow	Lbs. Milk	% Fat	Lbs. Butterfat
Landis, Wm. H.	No. 9	H.	2881	3.6
	No. 33	H.	1624	4.4
	No. 32	H.	2108	3.2
	No. 22	H.	1526	4.0
	No. 5	H.	1691	2.8
	No. 10	H.	1599	2.9
Deubler's Sons, Jas.	No. 19	H.	1210	3.5
	No. 20	H.	1184	3.5
	Mona	Ayr.	1515	4.8
	Trophy	Ayr.	1574	4.1
	H. Hock	Ayr.	1400	4.0
	B. Cup	Ayr.	1151	4.2
Ursinus College	Viola	Ayr.	1045	4.6
	Nellie	Ayr.	1156	4.0
	Betsy	Ayr.	1425	3.2
	Rena	Ayr.	1257	3.3
	No. 12	Hol.	1562	4.5
	No. 9	Hol.	1551	4.0
Wisner, Chas. E.	No. 6	Hol.	1910	3.2
	No. 4	Hol.	1117	3.9
	E	Hol.	1386	4.4
	Lady	Hol.	1397	3.4
	Colantha	Hol.	1288	4.6
	Mary	Hol.	1159	3.5
Gerhard, Owen	Black T.	Hol.	1506	3.8
	Nancy	Hol.	1484	3.2
	R. Cow	Hol.	1145	3.7
	Alice	Hol.	1053	4.0
	No. 15	Hol.	1296	3.2
	No. 2	Hol.	1571	3.5
Allderfer, Vincent	Joanna 1	Hol.	1495	3.3
	Yeema	Hol.	1526	3.5
	Blackie	Hol.	1883	2.8
	Joanna 2	Hol.	1299	3.9
	Lady	Hol.	1338	3.6
	Hazel	Hol.	1546	3.4
Murphy, Harvey	Beets	Hol.	1403	3.2
	Lightfoot	Hol.	1120	3.8
		Hol.	1221	3.3
		Hol.		

*Milked 3 times a day.
**Milked 4 times a day.

CHESTER VALLEY COW TESTING ASSOCIATION Warren Shingle, Tester

The Chester Valley Cow Testing Association finished their seventh year April 1, 1927, with nineteen whole-year members. There were 503 cows in the Association during all or part of the year.

The result for the six years testing is as follows:—

Year	Av. No. Cows	Lbs. Milk	Lbs. Fat
1922	400.57	6,616	278.3
1923	335.82	6,970	280.9
1924	368.74	7,247	294.6
1925	376.73	6,186	283.1
1926	260.66	6,011	276.3
1927	445.67	6,085	291.0

The result for the members is as follows:—

Total average number of cows in the Association	445.67
Av. per cow:	
Lbs. of milk	6,085
Lbs. of butterfat	291.0
Percentage of butterfat	4.8
Value of product	272.96
Cost of pasture	8.78
Cost of roughage	23.25
Cost of grain	45.30
Total cost of feed	77.33
Value of product above feed cost	195.63
Returns for \$1 expended for feed	3.53

Individual Herd Records

Eight herds with an average of 5 or more cows exceeded an average production of 300 lbs. of butterfat. A complete list of these herds follows:—

Owner's Name and Address	Av. No. cows	Breed	Lbs. milk	Lbs. fat	County
C. E. Mather, West Chester	17.25	RJ & GJ	7,453	352.7	Chester
Norman K. Beach, Parkersburg	20.25	R & GG	7,099	352.3	Chester
R-1	30.17	RG	6,802	350.4	Chester
Harry B. Shenk, Elverson	17.42	RG-GG-RJ-GJ	6,861	345.0	Chester
Mrs. Mary N. Carter, Pocopson	15.00	RJ	6,563	343.2	Chester
Claverach Farm—James Speirs, Downingtown, Pa.	25.58	RJ	6,166	312.6	Chester
Wm. M. Lloyd, Downingtown	18.67	RJ	6,183	310.3	Chester
Wallace C. Pierson, Downingtown	13.33	GH & R & GJ	7,579	304.5	Chester
Jonathan P. Styer, Glen Moore					

"Another thing we like about it is that the price of the feed is the most satisfactory we can get"



These three cows averaged for the year 10,508 lbs. of milk and 369.9 lbs. butterfat on Amco 24% Dairy.

A year's record with Amco 24% Dairy

Average number of cows milked	17
Cost per 100 lbs. milk (including all feed)	\$1.25
Return for \$1.00 expended for feed	\$2.40
Feed cost per pound butterfat (all feed)	\$.37

11,180 lbs. of milk; 471.3 lbs. fat. Her profit for the year over feed costs was \$225.40.

J. P. White and Sons of Hickory, Pa., owners of the cows shown above, recently wrote us their experience with Amco 24% Dairy feed. They said:

"We have used your 24% feed for the past four years. It has the right amount of bulk and is palatable to the cows. We mix our own corn and oats with it, usually about one part corn and oats to four of the 24%. Another thing we like about it is that the price of the feed is the most satisfactory we can get. "The record of our herd for the past year with Amco 24% Dairy follows:

Average number cows milked	17
Cost per 100 lbs. milk (including all feed)	\$1.25
Return for \$1.00 expended for feed	2.40
Feed cost per pound butterfat	.37

"The second cow produced 9,763 lbs. of milk; 306.3 lbs. of fat. Profit for the year over feed costs, \$157.48.

"Cow No. 3 in the picture produced 10,582 lbs. of milk; 332.1 lbs. of fat. Profit for the year over feed costs, \$169.26."

Amco Feed Mixing Service is regularly accumulating experience of this kind. Amco 24% Dairy does well, not for one year but year after year, and every year the cows do better.

We must get two dollars per 100 lbs. of milk for every dollar spent for feed. One dollar goes for hay, silage, and grain; one dollar goes for labor and other costs. What comes in over the two dollars is real profit.

Mr. White made 40 cents on each two dollars spent. This is an earning of 20% on his investment.

The first cow to the left of the picture produced

DIVISION OFFICE: MUNCY, PA.

AMCO

FEED MIXING SERVICE

AMERICAN MILLING COMPANY

Executive Offices—Peoria, Ill.

Plants at: Peoria, Ill.; Omaha, Neb.; Owensboro, Ky.
Alfalfa Plants at: Powell, Garland, and Worland, Wyo.

FROM MILKING TIME TO MARKET-ING TIME



Clean, cool milk until marketing time is certain with a cooling tank and cooling house, both of Concrete.

Concrete is permanent, easily cleaned, always sanitary and moderate in cost.

Free Construction Plans

Blueprints and instructions for building a concrete milk cooling house and tank cost nothing. Just ask for them.

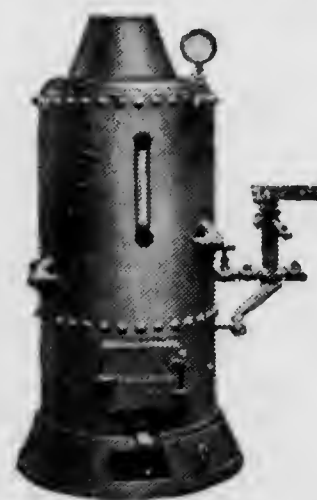
"Concrete on the Dairy Farm," an illustrated booklet, is free. Ask for your copy.

PORTLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete

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FARQUHAR DAIRY BOILER

will help you produce certified milk. Farmers and Dairywomen have found this Boiler most convenient, easily and quickly steamed and by virtue of its interior arrangement, it is most economical. Just the Boiler for sterilizing, heating water, cooking feeds, heating molasses for mixing sweet feeds, etc.

Built in full accord with the American Society of Mechanical Engineers' Code and meets every requirement of the state of New York. A great time and labor saver. Helps to get that higher price for milk. Write for complete specifications and rock bottom price.

A. B. FARQUHAR CO., Limited Box 461, York, Pa.

NICE

THE NAME TO GO BY—WHEN YOU GO TO BUY PAINTS AND VARNISHES

Write for Color Cards and Booklet "Paint Pointers"

EUGENE E. NICE COMPANY, Inc., PHILADELPHIA

LITTER FOR POULTRY HOUSE

Straw is a material which is very satisfactory for litter in the poultry house. It must not be musty or moldy. When used in the brooder house, it should always be cut in short lengths, about two inches long. Oat, rye or wheat straw may be used.

PROVIDE FALL PASTURE

Sweet clover sown in wheat or oats this spring will provide considerable pasture in the fall, and next summer it will carry 2 to 4 cows per acre. Dairy farmers are urged to try this cheap method of summer feeding. The soil must be sweet.

HALF FARM COOPERATIVES

BUY AS WELL AS SELL

Fifty per cent. of the farmers' business associations in the United States engage to some extent in cooperative buying. Some of them are formed exclusively for that purpose, although the majority buy commodities simply as a side-line, their main function being co-operative selling. Cooperative purchasing was reported by 5,386 associations last year, according to reports received by the United States Department of Agriculture. Of this number 62 per cent. bought feeds; 47 per cent. fuel; 30 per cent. containers; 20 per cent. seeds; 19 per cent. fertilizer; 15 per cent. building materials; 13 per cent. fencing material; 11 per cent. implements and machinery; 7 per cent. hardware; 5 per cent. spray materials; and 30 per cent. handled miscellaneous commodities.

Purchasing activities are not confined to the cooperatives of any particular section of the country. The largest percentage of cooperatives engaged in purchasing, however, is found in Maryland, New Jersey, Kansas, Ohio, Nebraska, Pennsylvania and North Dakota. More than 60 per cent. of the associations in these States purchase supplies for their members.

The associations in New England and the Middle Atlantic States bought largely feeds and fertilizers, and the associations in the South Atlantic States, fertilizers and seeds. Those in the North Central States bought feeds and fuel largely, and those in the Pacific Coast States containers, including barrels, baskets, bags, crates and fruit packages.

By commodity groups, the percentage of associations reporting cooperative selling were as follows: Grain associations 86 per cent.; fruits and vegetables, 58 per cent.; forage crops, 50 per cent.; poultry and poultry products, 39 per cent.; wool, 34 per cent.; cotton and cotton products, 27 per cent.; livestock, 23 per cent.; dairy products, 18 per cent.; nuts, 13 per cent.; and tobacco, 8 per cent.

CORN BORER ATTACKS VARIETY OF PLANTS

Corn is the most common host of the European corn borer in this country, and as such, sustains more serious injury than any of the other plants attacked. Several field crops, weeds, and flowering plants are attacked, also, but no severe money loss due to injury has occurred on any except corn. Many of the other plants serve primarily as a shelter.

In New England, 224 species of plants are recorded as hosts of the corn borer. Not more than 38 of these, however, are known to constitute real food plants for the pest. Among the plants quarantined in the East by the federal horticultural board, either because of susceptibility or because of the likelihood that they are carriers, are: Corn and broom-corn, including all parts of the stalk, all sorghum, Sudan grass, celery, green beans in the pod, beets with top, rhubarb, chrysanthemum, aster, cosmos, zinnia, hollyhock, gladiolus, dahlia, and oat and rye straw.

Quarantine West

In the West where the borer usually produces but one brood in a season, the quarantine applies to corn, broom-corn, and all sorghum and Sudan grass, except the grains of these when properly cleaned.

Experiments prove that the borer can be quite effectively checked in the East by thoroughly destroying all refuse including corn stubbles, old stalks, and cobs including waste that accumulates around canning factories. The refuse should be destroyed in the spring previous to May 1, or before the borer changes to the moth which will lay eggs to produce the next generation.

The state college of agriculture and the local farm organizations in the counties most seriously infested are co-operating with the farmers and the federal government to show the farmers the best way to destroy the borer and to help them with individual problems.

MORE FOOD PRODUCTS IN COLD STORAGE

Over 3,400,000 dozen more eggs and 3,000,000 pounds more poultry were in the 71 licensed cold storage warehouses in Pennsylvania on March 31 this year than on the same date a year ago, according to a report issued by the State Bureau of Foods and Chemistry. With the exception of butter, a greater amount of practically all important food products were in storage. The great increase in the number of eggs in storage is probably due in large part to the early laying season this year as compared to a late season last year.

The amount of important food products in cold storage on March 31 as well as the amount on the same date a year ago are as follows:

Food Products in Cold Storage			
	March 31, 1927	March 31, 1926	
Eggs in shell, doz.	3,789,427	337,464	
out of shell, lbs.	1,983,129	1,202,089	
Butter, lbs.	217,774	1,364,939	
Poultry, lbs.	5,297,675	2,446,907	
Fish, lbs.	2,562,444	2,479,353	
Game	70,429	112,511	
Beef, lbs.	1,796,227	1,247,899	
Veal, lbs.	50,883	51,967	
Mutton, lbs.	269,115	225,416	
Pork, lbs.	3,671,001	2,416,016	

The dairyman who buys feed in small quantities at retail and sells his milk at wholesale, stands a rather poor chance of making money in dairying.

INTENDED TRUCK GROWING ACREAGE IN NEW JERSEY

As another indication of spring, come the estimates on the intended acreages to be planted to truck crops in the State of New Jersey. The estimates are based on the present intentions of farmers and will be checked by later figures made after the crops are in the ground.

A falling off of 5% from last year's acreage is predicted for both table and can-house tomatoes. Cantaloupe plantings will decrease 7%, while watermelons, according to these early compilations, will suffer a still greater cut of 15%. Sweet corn acreage will be 5% short of last year's market, if the farmers plant as they have indicated. Onion and string bean plantings will show a slight set back of 3%. The lima bean acreage will drop 12%.

Strawberries promise to be plentiful this summer, with the 20% increase in acreage that the farmers contemplate. A government report warns that prices will probably be lower than last year, because of the large acreage planted of this table delicacy in the South and Mid-west. Green peas will be more plentiful by 10% than they were last season.

Other crops which show increases are as follows: Cucumbers, 8% asparagus, 7%; peppers, 6%; spinach (spring) 3%; and lettuce (spring) 2%. No change is indicated in the acreage of cabbage, celery and eggplant.

BACTERIA AND WHAT IT MEANS TO THE FARMER

(Continued from page 1)

percent. of milk sugar in milk, and change it to lactic acid. When a certain degree of acidity is reached, we say the milk is "on the turn." When more acidity is reached, the milk becomes sour and finally curdy and clabby.

Occasionally other types of bacteria which cause the proteins in milk to break down, will be more numerous or overcome the acid producers. This explains the decomposing or "rotting" of milk before it becomes sour.

Ropy and stringy milk are caused by bacteria. These bacteria may come from the udder of the cow due to inflammation. On the other hand, they may come from outside sources as it is known that these organisms live in surface water, and the cows after wading may carry the organisms to the stable. These bacteria may be spread from cow to cow in the process of milking.

The dairy manufacturing industry is entirely dependent on bacteria from several standpoints. First, butter is made by allowing cream to ripen or sour to a certain degree of acidity. Butter is also made by pasteurizing sweet cream and adding a "starter" which is a strong culture of bacteria cells.

Pasteurizing, one of the most important processes in a modern dairy plant, is used to destroy all disease bearing bacteria. It also kills part of the acid producers and thus keeps milk from souring for a longer time.

Cheese could not be made without bacteria to cause the curd to "whey off." The many forms of cheese are made by different uses of bacteria in the manufacture and curing of the product.

Commercial buttermilk is now used in large quantities. It is made by pasteurizing sweet skim milk and adding a commercial "starter" of acid producing bacteria. Pasteurization produces a good flavor, renders it safe from disease bearing bacteria, and insures the uniformity of the product. Commercial buttermilk is more nutritious than buttermilk from churned sour cream. It is not diluted with water as is usually done in the process of a churning.

Fermented milks are also made by the use of certain types of bacteria. They are often described in the case of weak digestion.

By these illustrations we can see that dairy manufacture and the study of bacteria are very closely related.

Bacteria are very beneficial to life. Plants could not use food from the soil, animals could not digest their food, and the human race could not long exist if these tiny organisms were not present.

While there are some types of harmful bacteria, science is finding many ways to combat these. It may be noted in this connection that the death rate due to germ disease, in spite of the increase of population, is becoming lower.

OVERLOOKED

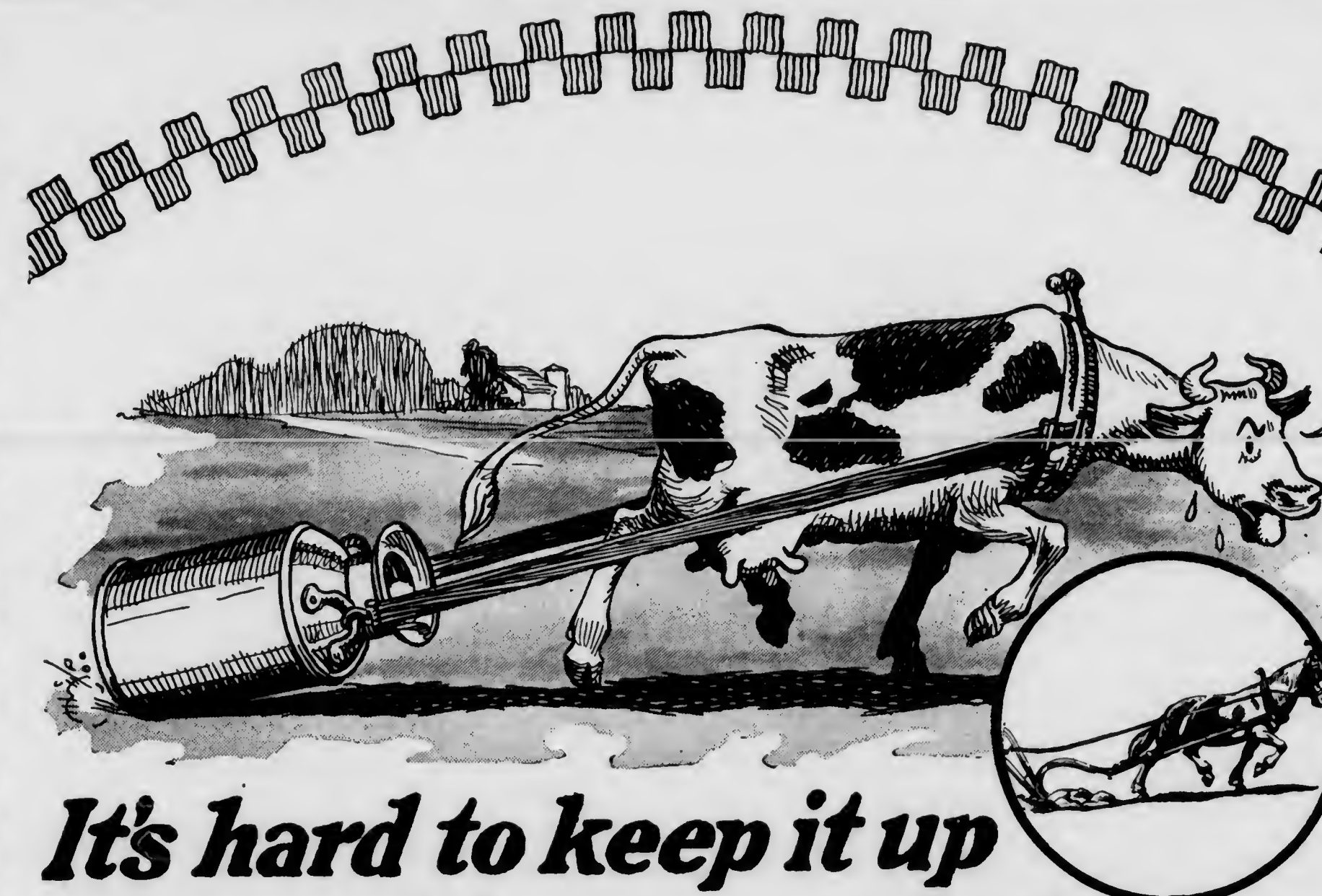
During a recent speed-law enforcement wave in a western state a motor policeman stopped an autoist. He was met by the inquiry, "What are you stopping me for? I wasn't speeding."

"I know it," was the reply. "And I am not drunk—have not even been drinking."

"I know that, too, but you haven't your dimmers on."

"That's funny; I certainly put on everything that Mary laid out for me."

—Exchange.



It's hard to keep it up with nothing to eat but grass

A HORSE doing hard field work always gets his supper of grain. You wouldn't think of just turning him out to pasture. He couldn't keep up on grass alone.

Making milk is actually a bigger drain on a cow than spring work is on a horse. The energy used in making milk and repairing body tissues calls for even more grain than the horse gets.

Feed Purina Cow Chow throughout the summer. You'll have healthy cows that'll give you more milk right through the summer, fall and winter. You'll need less feed in the fall—and you'll be getting extra milk when other cows are in a slump!

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MANY HERDS AWAIT TB TEST

On April 1, a total of 2,705 herds in 54 counties were awaiting the tuberculin test on the individual herd plan and all the herds in 210 townships in 44 counties were awaiting the test on the area plan, according to a report of the Pennsylvania Bureau of Animal Industry.

Up to that date 3,705 herds totaling 63,886 cattle had been accredited by the individual herd test and 581 whole townships including 452,241 cattle had been tested by the area plan.

SOIL SURVEYS IN THE UNITED STATES

During the past year there have been 75 soil surveys begun or completed in 29 States by the United States Department of Agriculture. The total area surveyed in these projects aggregates 24,219 square miles, or 15,500,160 acres. This brings the total area surveyed and mapped in detail since the beginning of the work up to 708,670 square miles, or 453,548,680 acres. Reconnaissance surveys have also been made amounting to 874,262 square miles.

USE SKIMMILK POWDER

Skimmilk powder is proving almost a perfect substitute for skimmilk in raising dairy calves. It can now be purchased generally through feed dealers and is prepared by mixing one part of powder with nine parts of warm water. Calf-raising thus becomes easier in communities where whole milk is sold.

There are only two reasons why a man should farm; because he likes farming and because he can make money at it. The good farmer combines the two.

MARSHALLVALE GUERNSEYS

Herd Sire, Confident Senator 95001, by Lone Pine Senator 59906 AR, a double grandson of Imp. King of the May.

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SUPERIOR in production, regular in calving, noted for size and vigor, consistent in profits returned—Holsteins are known as the most dependable of all dairy cows.

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EMBARGO ON CANADIAN MILK AND CREAM MODIFIED

The embargo against milk and cream from the Canadian territory within a radius of 200 miles of Montreal placed by the United States Department of Agriculture March 26, under the provisions of the food and drugs act, because of an epidemic of typhoid fever, was modified April 26th. The change in the embargo permits milk and cream produced in this section of Ontario to be brought into this country, but the embargo remains in force on all the territory in the Province of Quebec included in the original embargo.

The modification was made by the Department of Agriculture on the recommendation of the United States Public Health Service, based upon information secured from its own agents and the Dominion health authorities and on assurances of extremely rigid sanitary control by the provincial authorities of Ontario. Milk and cream produced in any part of that province may now be shipped into the United States, but no milk and cream produced in the restricted area of the Province of Quebec shipped into the United States.

Telegraphic instructions advising of the modification of the embargo have been issued to collector of customs, consular officers in Canada, and to import control laboratories of the Bureau of Chemistry, which enforced the terms of the food and drugs act under which the embargo was placed.

ONE-FIFTH OF FARM HOMES HAVE RUNNING WATER

One out of every five farm homes in Pennsylvania has running water and a heating system, according to estimates as of January 1, 1927, compiled by the Bureau of Statistics, State Department of Agriculture. One of every eight farm homes is also equipped with a bathroom.

The number of farm homes having running water totals 47,138, or 20 per cent of the farms. The counties having the highest percentage of their farm homes equipped are Philadelphia, Chester, Delaware, Lancaster, York, Washington, Somerset, Schuylkill, Montgomery, Cambria and Allegheny.

Philadelphia county leads in percentage of farms having bathrooms, with more than two-thirds so equipped. Montgomery and Chester counties rank next with almost one-third having this convenience. Delaware and Allegheny follow with about one-fourth. Forest county takes bottom place with only 11 farms having up-to-date equipment.

Farms having heating systems total 43,769, an increase of about 4,000 during the past year. The leading counties in percentage of farm homes equipped are Delaware, Chester and Westmoreland. Other counties having more than one-fourth of their farm homes so equipped include Allegheny, Beaver, Bedford, Chester, Erie, Fayette, Indiana, Lancaster, Lawrence, Lebanon, Lehigh, Montgomery, Northampton, Philadelphia, Schuylkill, Somerset, Susquehanna, Washington and Wayne.

Reports recently issued by the United States Department of Agriculture show that the total value of farm land and buildings in this country declined about 25 per cent from 1920 to 1925. Land, alone, declined about a third, but farm buildings increased two per cent.

What a cow is fed affects profits more than any other element in her care and keep.

Better Milk by simply using the B-K Rinse

85% of bacteria in milk comes from contact with non-sterile cans and other utensils at the farm. 85% of them can be removed by a B-K Rinse.

Separators

B-K rapidly dissolves the invisible film of casein and other matter that clings to the bowl and fittings. After washing as usual, a B-K Rinse in water containing a little B-K, effecting remarkable reduction in bacteria and germs. Send for Separator Bulletin 112.

Milking Machine Parts

Just keep them between milkings in a dilution of B-K and water. For protection against possible spread of infection, from cow to cow while milking, rinse the cups and tubes in a pail of the B-K dilution after milking each cow. Send for Milking Machine Bulletin 124.

Cans Without B-K Rinse with B-K Rinse

Illustrations are based on actual tests. Milk Can No. 1 after washing with hot water and brush, contained 41,000,000 bacteria (not fit to receive milk). Can No. 2 after washing the same way was given a B-K Rinse. 95% of all bacteria in the can was destroyed. Send for our Bulletin 228 on sterilizing milk cans.

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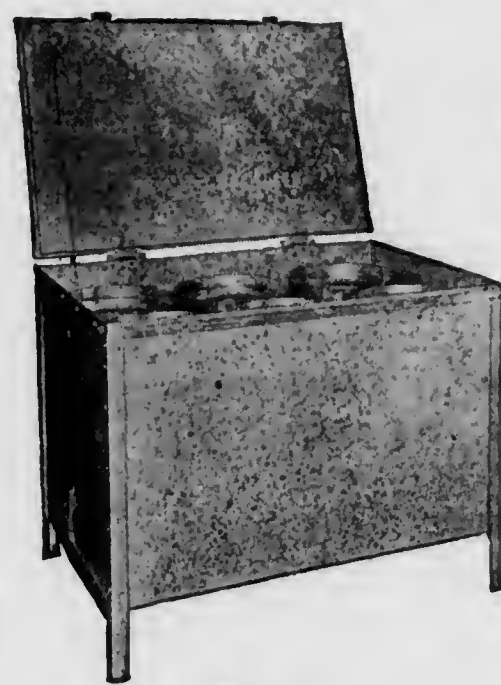
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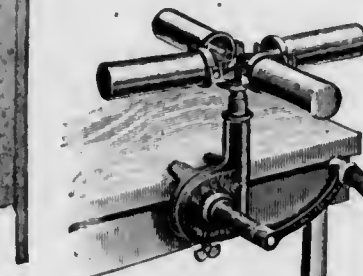
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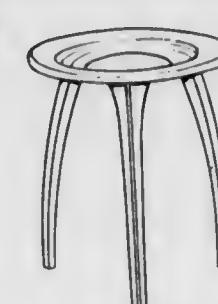
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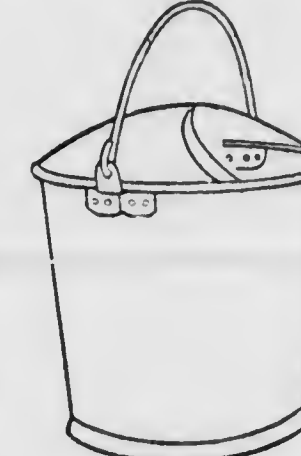
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PHILADELPHIA BALTIMORE

DAIRY INDUSTRY CONFERENCE WASHINGTON, D. C.

(Continued from page 10)

Cake

Made in the baking laboratory using concentrated sour skim-milk.

Milk

Produced at the Beltsville Farm.

Coffee

The sterilized coffee cream was produced on the Beltsville Farm and bottled and sterilized in the laboratory.

Wednesday afternoon's session was devoted to a study of the scope of the work of the Bureau of Agricultural Economics, under the direction of Lloyd S. Tenney, Assistant Chief in charge of service and regulatory work.

Addresses were made by Mr. Shoup, on International Trade in Dairy Products; W. K. Callander on Milk Production and Cow Population Statistics; L. W. Davis on Production, Storage, Stocks, Market Receipts, etc., of dairy products. Mr. Tolley, on Dairy Farm Management; F. A. Buechel on Dairy Marketing Studies; Dr. Stine on Foreign Competition; C. L. Christenson, Cooperative Marketing of Dairy Products; R. C. Potts, Standardization and Inspection of Dairy Products, and J. C. Margnis, How Dairy Economics Information is Published and Disseminated.

Thursday's Meeting

An added feature of this year's convention was that of including in the program a comprehensive study of the work of the Department of Commerce.

The visitors were welcomed by T. S. Taylor, Assistant Secretary of the Department, after which the meeting was

in charge of E. G. Montgomery, Chief of the Division of Foodstuffs.

Addresses were made by the representatives of the various divisions of the Department, each of whom briefly outlined the functions of the respective departments. These included Frank M. Surface, Chief, Domestic Commerce Division; R. M. Hudson, Chief, Simplified Practices Division; N. F. Titus, Chief, Transportation Division; H. L. Deibel, Jr., Asst. Chief, Foreign Traffic Division; H. DeCoursey, Commercial Law Division; A. R. Hillyer, Chief, Commercial Intelligence Division; J. Holm, Chief, Statistical Division; W. H. Rastall, Chief, Machinery Division, and E. G. Montgomery, Chief, Foodstuffs, Division.

The general session was concluded with these addresses, after which the delegates repaired to the White House where they were presented to the President, Calvin Coolidge.

KEEP RECORDS ON HENS

Forty-nine flocks of laying hens, upon which records were kept during the past year, made their owners handsome profits.

Twenty-nine flocks in Lancaster county, averaging 381 birds, produced 136 eggs and returned \$2.32 per bird above feed cost on the average. In Juniata county 13 flocks averaged 180 birds, 136 eggs and \$2.18 per bird above feed cost. Bucks county flocks, averaging 734 birds in seven flocks, laid 132 eggs per bird for a return above feed cost of \$2.42.

FREE BULLETINS CONTAIN TIMELY INFORMATION

The latest revised list of bulletins issued by the Pennsylvania Department of Agriculture, includes the following publications which are of interest to farmers, gardeners and fruit growers during the summer months:

Number	Subject
261	Sour Soil and Liming.
340	The Brown Rot of Fruits.
369	The Apple Industry of Pennsylvania.
390	The Japanese Beetle in Pennsylvania.
393	Problems in Marketing Pennsylvania Wheat.
398	Scale Insects Injurious in Pennsylvania.
404	Bovine Infectious Abortion.
405	Oriental Fruit Moth.
406	Sprays for Japanese Beetle.
408	The Vegetable Industry of Pennsylvania.
416	Pennsylvania Weeds.
417	The Mexican Bean Beetle in Pennsylvania.
418	The Peach Tree Borer and Its Control.
428	Pennsylvania as a Market for Potatoes.
429	Cooperative Buying and Selling by Farmers.
437	Some Phases of Taxation in Pennsylvania.

Cir. 4 Preparation and Care of Lawns. Any of these bulletins will be sent free to persons interested. Requests should be addressed to Geo. F. Johnson, Editor, State Department of Agriculture, Harrisburg.

The waste is greater than the benefits if cattle are turned on pasture too early.

THE WAGES OF FARM LABOR

Reports to the Department of Agriculture indicate that the wages of farm laborers throughout the country now average \$34.53 per month with board, and \$48.37 per month without board. The rates have been stationary for a year. The Department's reports indicate that the wages of farm laborers are 166 per cent. of the pre-war level, while industrial wages are about 231 per cent. of the pre-war rates. It is also stated that competition with high industrial wages has evidently acted as a factor in maintaining the rates of farm wages during the past year in the face of the fact that in nearly all the rural sections an increase in supply of labor is reported. In the South, there appears to be a decrease in labor supply. (Presumably negro migration has been a factor.) In consideration of these figures, it should be remembered that farm laborers are frequently unmarried young men who are the sons of farmers.

124,600 PENNA. FARM HOMES HAVE TELEPHONES

More than 124,600 farms or 62 per cent of all farms in Pennsylvania have telephones, according to the latest estimate of the Bureau of Statistics, State Department of Agriculture. Seven years ago, approximately 100,000 farms had telephones.

The leading counties in percentage of farms having telephones are: Bradford, 87 per cent; Butler, 82; Chester, 80; Clarion, 76; Cumberland, 79; Delaware, 75; Franklin, 77; Greene, 78; Juniata, 77; Lycoming, 76; Philadelphia, 93; Susquehanna, 79; Union, 77; Washington, 85; Westmoreland, 79.

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IS SIMPLE AND EASY TO OPERATE

Facts about the De Laval Milker

1. 650,000 cows now milked the De Laval Way.
2. De Laval Milkers now in their eleventh year of use.
3. 83.27% of the users report average saving of 2 hrs., 12 mins. per day—saves half the time in milking.*
4. 97.13% of the users say it agrees with their cows.*
5. 99.4% of the users say they get as much or more milk with the De Laval as by hand milking.*
6. 6.49% average increase in production per cow is reported by those who claim the De Laval Milker increases production.*
7. 94.80% of De Laval users say their milker is easy to keep in a clean and sanitary condition.*
8. Average bacteria count of all reporting, 14,542—62% report counts of 10,000 and less.*
9. 96.45% of De Laval users say their milker is "the best," "one of the best," or a "good" investment, as compared with other farm equipment they own.*

*Based on reports from 1844 De Laval Milker users in all parts of the U. S. and Canada.

The De Laval Separator Company

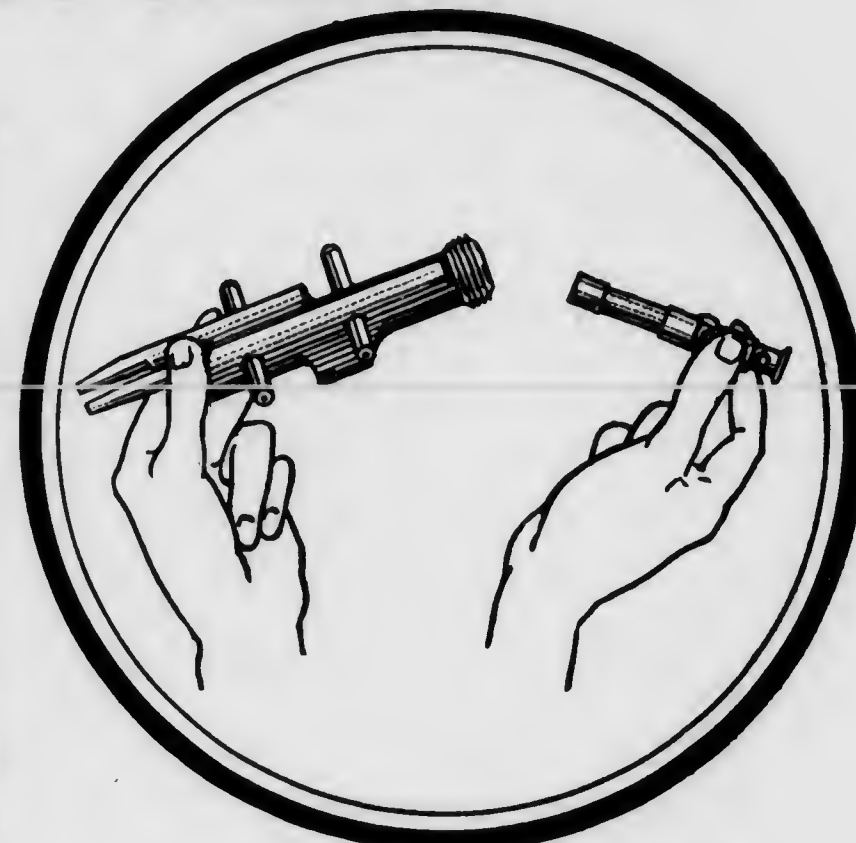
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The pulsator is an example of the simplicity of the De Laval Milker—only one moving part!

THE simple design and rugged construction of the De Laval Milker provide ample assurance of absolute dependability.

You do not have to be a mechanic to operate a De Laval. It is entirely "fool-proof," for there are no adjustments to be made—no one can alter its action or change the speed at which your cows are milked.

Milk Produce

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

VOLUME VIII

WEST CHESTER, PA., AND PHILADELPHIA, PA., JUNE, 1927

NUMBER 2

NASSAU DELAWARE COMMUNITY HOLDS ANNUAL MEETING

Hears Reports of Cow Testing Association

Milk production in the Nassau Community, in Sussex county, Delaware, has made most satisfactory progress during the past three years' development work in its dairy program.

Not only has the volume of its milk production increased steadily, but its quality has also shown steady improvement, and from an economic standpoint, has made money for its producers.

One of the features in this community during the past year has been the development of the Nassau Cow Testing Program. This, in itself, has done much to inform the milk producers as to the profits or losses involved in the operation of their dairies in this territory.

The third Annual Meeting of the Nassau Milk Producers' Association, which was held at Midway, near Lewes, Delaware, on May 3rd, emphasized this feature of its program as one of the outstanding ones of its three years' work. The meeting was held under the auspices of the Extension Department of the University of Delaware, the Inter-State Milk Producers' Association, the Philadelphia Inter-State Dairy Council, the Supplee-Wills-Jones Milk Co., the Nassau Local of the Inter-State Milk Producers' Association, and the Sussex Trust Company, of Lewes, Del.

County Agent M. C. Vaughn, of Sussex county, presided at the meeting and in his address referred to the wonderful program which has, through the co-operation of all of the interests concerned, been so successfully carried out. He referred briefly to the purposes of the meeting and to the annual reports of the local Cow Testing Association and to discuss alfalfa, as an aid toward more economic dairying.

W. E. Thompson, President of the Nassau Local of the Inter-State Milk Producers' Association made an interesting address.

He complimented the University of Delaware, which, through its Agriculture College and its Extension Department, had done much to assist the farmer and dairyman of that section. The Sussex Trust Company, of Lewes, for its co-operative work in financing the purchase of dairy cattle. The Supplee-Wills-Jones Milk Co., for its co-operative spirit in the building and operation of the Nassau Station and the Inter-State Milk Producers' Association and the Philadelphia Inter-State Dairy Council for their co-operation in developing the satisfactory dairy program which has been established.

"When Mr. Collee, of the Quality Control Department of the Dairy Council and his field men visited us and explained the requirements for producing A grade milk for the Philadelphia market, our hair really stood on end in fright. All our wives took lessons in scrubbing milk pails. We cleaned, brushed our stables, scrubbed our cows, hauled manure, cooled our milk just so, and did many other things we considered nonsense before. We worked hard



Students at Pennsylvania State College in the Dairy Council's "Foreign Play" which was presented before a dairy meeting with an audience of eighteen hundred farmers and their families

for those permit cards. Perhaps they worked harder than we did. When he had us straightened out along this line, he told us we needed the right kind of cows, so he urged us to start a Bull Club, gave us working ideas. Then he encouraged us in buying a few good heifers. Still he wasn't satisfied, he felt we should do some intelligent eliminating of our stock. Last year, he made a wonderful proposition to us, enabling us to have our cows tested every month, practically free of charge and with a minimum of labor for a period of one year. To-day we are all eager to hear the report of this work. We feel grateful to Mr. Twining and his department for their efforts. Three years ago, Mr. Collee gave us a very vivid picture of this community five years hence, drawn from his own vision of the possibilities as he saw them. We believe that Mr. Collee's picture is becoming a reality, and if we will continue our improvement work, by the end of five years, our community should compare favorably with Grove City, Pennsylvania.

(Continued on page 10)

PENNSYLVANIA STATE COLLEGE HOLDS DAIRY EXPOSITION

Prizes Awarded in Contests

Under the auspices of the Penn State Chapter of the American Dairy Science Association, the Penn State College Agricultural School staged a highly creditable Dairy Show on May 7th, 1927. The general program was directed by President John M. Stazewski, and associated committee members.

Thirty-seven students participated in the dairy cattle fitting contest. A. C. Hug, Germantown, Pa., was awarded the

technique that he not only won the award of champion showman but drew exclamations of admiration from the spectators and words of commendation from seasoned followers of the big show rings, who asserted they had never seen a finer display of showmanship at any dairy event, the National Dairy Show included. He received a beautiful silver loving cup and medal presented by the Dairymen's League. Second, third, and fourth place winners were H. R. Larson,

Ridgway; Clark Bowen, Wellsboro, and F. W. Morrow, Camptown. These students received prizes through the courtesy of the Loudon Machinery Company, James Manufacturing Company, and Purina Mills. Thirty-seven students competed.

In the dairy cattle judging contest, H. P. Fox, Cabot, Pa., had the highest number of points in placing all of the four breeds judged. He was presented with the silver cup and medal donated by Mrs. J. Gordon Cox Fletcher, Malvern, Pa., a former short course student at Penn State who has been an enthusiastic supporter of the show ever since her first knowledge of it. Excellence in judging the breeds was displayed by T. H. Patton, New Castle, in Holsteins; B. C. Denning, Waynesburg, in Guernseys; R. R. Wilkinson, Wellsboro, in Ayrshires, and M. T. Seepansky, Morton, in Jerseys. Twenty-six boys participated in the judging events. The breed winners all received medals presented by the Pittsburgh Dairymen's Cooperative Sales Company.

Excel in Judging Dairy Products

The dairy products judging contest was divided into two groups, those with professional experience and those with amateur standing. In the former class A. W. Culbion, Oil City, scored the highest number of points in placing all four products and was awarded the cup and medal given by the DeLaval Separator Company. He also was first in judging ice cream, for which he was awarded a five-year subscription by the Ice Cream Field. C. L. Zook, Pittsburgh, took second sweepstake honors and first in milk judging. His respective prizes were a subscription to the Ice Cream Trade Journal and a \$5.00 gold piece from the Supplee-Wills-Jones Milk Company, Philadelphia. The best butter judge was L. D. Zern, Norristown, who was presented with a subscription by the Butter, Cheese and Egg Journal. For excelling in his taste for

(Continued on page 6)

AMERICAN INSTITUTE OF CO-OPERATION DEVELOPMENT OF COW TESTING ASS'NS

Dairy Program—July 5-9 Inclusive

By F. M. Twining*

A vast array of speakers, leaders in the industry, headed by the Hon. William M. Jardine, National Secretary of Agriculture, will form the group of speakers during the opening week of the Third Session of the American Institute of Cooperation which begins its four weeks session in Chicago, Ill., on June 20th, 1927.

The sessions will be held in the School of Commerce, Northwestern University in Wilhoit Hall, corner Lake Shore Drive and Chicago Avenue, Chicago, Ill., and will continue until July 16th.

Executives of the cooperative movement and farm leaders from practically every state are expected to be in attendance. These men will meet with leading economists and financiers to study the business problems connected with the marketing of the greater agricultural crops of the United States.

The first weeks session will be devoted primarily to staple crops, such as wheat, corn, oats, rye and cotton. This session will be under the direction of Dr. John D. Black, University of Minnesota, as chairman.

The second weeks' session will be devoted to the study of problems of cooperatives engaged in marketing livestock and wool. This session will be under the direction of Dr. E. G. Nourse, Institute of Economics, Washington, D. C.

The third weeks' session, July 5th to 9th will consider the problems of the dairy cooperatives and will be in charge of Robert W. Balderston, Secretary, the Inter-State Milk Producers' Association, Philadelphia, Pa.

The following tentative program has been prepared for this session:

Tuesday, July 5—Present Status of Dairy Cooperation in the United States. Charles W. Holman, secretary, National Cooperative Milk Producers' Federation; Suggested Set-Up for Collective Bargaining Dairy Cooperatives, I. W. Heaps, secretary, Maryland State Dairy-men's Association; The Small City Distributing Cooperative Association, A. D. Lynch, manager, Dairy Department, Illinois Agricultural Association; Organization Problems of Cheese Producers, H. H. Bakken, University of Wisconsin, discussion led by Frank G. Swoboda, general manager, Wisconsin Cheese Producers' Federation; The New England Milk Marketing Survey, Wm. A. Schoenfeld, Department of Agriculture.

Wednesday, July 6—Problems of Butter Cooperatives. John Brandt, president, Land O'Lakes Creameries, Inc.; Quality Improvement Work, A. J. McGuire, general manager, Land O'Lakes Creameries, Inc.; Maintaining Quality Production, C. I. Cohoe, Philadelphia Inter-State Dairy Council; Problems of Administration in Creamery and Cheese Factory, M. Mortensen, Iowa State College, Ames, Iowa; Cooperative Marketing in Our Educational System, Andrew W. McKay, Department of Agriculture.

Thursday, July 7—Survey of Membership Problems of Four Large Fluid Milk Cooperatives. J. W. Jones, Department of Agriculture; Getting Facts for Management, C. E. Sniffen, statistician, Dairy-men's League Cooperative Association, Inc.; Cooperative Organization Management as a Career, C. E. Hough, general manager, Connecticut Milk Producers' Association; Distribution of Control in the Cooperative, H. E. Erd-

man, professor of rural institutions and agricultural economics, University of California; Financing the Dairy Coop., E. H. Thompson, president, Springfield, Mass., Federal Intermediate Credit Bank.

Friday, July 8—Price Differentials between Markets. J. T. Horner, professor of agricultural economics, Michigan Agricultural College; Price Differentials between Products, T. G. Stitts, marketing specialist, University of Minnesota; A Cooperative and Production Control, I. W. Heaps, secretary, Maryland State Dairy-men's Association; Ten Years of the National Milk Producers' Federation, John D. Miller, president; National Cooperative Milk Producers' Federation; How Dairy Farmers Have Helped Themselves Through Organization, Clyde L. King, Wharton School, University of Pennsylvania; What a Fluid Milk Cooperative Can and Can Not Do, B. F. Beach, assistant secretary, Michigan Milk Producers' Association.

Saturday, July 9—How Dairy Cooperatives Have Helped Distributors Conduct Their Business More Efficiently. Henry N. Woolman, Supplee-Wills-Jones Milk Co., Inter-Relationships of Dairy Cooperatives, Richard Pattee, New England Milk Producers' Association; A Code of Ethics for the Dairy Cooperative, Clyde L. King, University of Pennsylvania; The Dairy Cooperative and a National Dairy Improvement Program, C. W. Larson, chief, Bureau of Dairying, Department of Agriculture, Washington, D. C.; Dairy Products in the World's Market, Lloyd S. Tenny, chief, Bureau of Agricultural Economics, Washington, D. C.

The fourth week, will consider the problems of cooperatives engaged in marketing perishable fruits, vegetables, and poultry products. Porter R. Taylor, Pennsylvania Department of Agriculture, Bureau of Markets, Harrisburg, Pa., will direct this session.

These various courses present an opportunity for members, employees and officers of cooperative marketing associations, teachers of marketing in universities and colleges, public marketing officials and private and public research workers may secure training. Practical experience and knowledge will be pooled for mutual benefit and the advancement of sound cooperation.

The Institute will serve to clarify thought concerning the real goal of cooperative endeavor; to analyze the experience thus far accumulated and to develop leaders and workers who can effectively serve the future needs of the movement. The whole spirit in which the Institute of Cooperation is conceived is that of the social and economic welfare of the nation.

COW TESTING ASSOCIATION COWS BRING HIGH PRICES

Early in May a farmer who was a member of a cow testing association in Lehigh County, Penna., sold his cows. These cows were sold largely on the basis of the cow testing association records. The highest price cow sold for \$400 and the next highest sale price was \$360. These cows were the two highest producers in the herd. The cows in the herd had been on test for three years.

KEEP COWS CLEAN

During the spring months dairy cattle should be curried daily. This will help in removing the old hair and will keep the hide in a good healthy condition.

Statistics of the Bureau of Dairying of the U. S. Department of Agriculture have brought to light the fact that the average production of all the cows in Cow Testing Associations in the U. S. in 1925 was 7,000 lbs. of milk per cow, while the average production of all cows was only 4,500 lbs. The gain in economy of production was 40c per hundred pounds of milk in favor of the higher producing cow, or in other words, the 7,000-lb. cow produced milk at a cost of nearly 1c per quart less than the 4,500-lb. cow.

Your average production at the Nassau Receiving Station last year of all cows was 3,712 lbs. of milk, and 161 lbs. of butterfat. The average production of the cows in the Nassau Cow Testing association was 6,075 lbs. of milk and 272.6 lbs. of fat. From this most excellent beginning, if the work here is carried on in the future, there is no reason why your average production per cow, in a few years, be as high as that of practically any other section of the country. You cannot, of course, hope to make phenomenal gains in production over night. It takes time, persistence and courage to build up a herd to high production averages, but the increase in the financial returns, and the satisfaction gained are certainly worth all the efforts involved, and then some.

Records Necessary to Carry on All Lines of Improvement

We all recognize the necessity, if we wish to increase the average production of our herds, of adopting the best feeding methods, the best breeding methods and the necessity of eliminating the low producers from the herds, but many fail to realize that in order to do any of these things, it is first absolutely necessary to adopt a system of keeping reliable records.

Denmark was the first to take up Cow Testing Association work, which they started more than thirty years ago, between 1897 and 1911—a period of 14 years she raised her average production per cow 2000 lbs. of milk, and the average percentage of butterfat $\frac{1}{2}$ of 1%.

Cow Testing Association work was started in the U. S. in 1906 with just one association. Twenty years later, or in 1925, there were 777 cow testing associations in this country. They checked on the production of 360,000 cows giving as much milk as 580,000 average dairy cows, or, in other words, 3.6 C. T. A. cows produced as much as 5.8 average cows.

On January 1st, 1927, there were 837 cow testing associations in the U. S. In comparison with the size of the dairy industry of this country, we should have a much larger number. Nevertheless, the work which has been done has materially increased the average production per cow of the country. In 1917 our average production per cow in the U. S. was 3,700 lbs. of milk. In 1924, 4,366 lbs. of milk, and in 1925, 4,620 lbs. of milk.

In Pennsylvania cow testing association work was started in 1910. We now have over 40 cow testing associations. The average production per cow in the associations has steadily increased year after year. In 1920 we had 94 herds having an average production of over 300 lbs. of butterfat, which is recognized as an exceptional accomplishment. In 1925

there were 301 such herds, and in 1925 we had 377 herds with an average butterfat of over 300 lbs., and the average milk production of all cow testing association cows was over 10,000 lbs. per cow.

Wisconsin was one of the last States to take up Cow Testing Association work, and they give a very typical example of what can be accomplished by carrying on the work year after year. Their location, remote from the best markets, makes it necessary for them to expect their dairy profits to come through low production costs, rather than from high selling prices for their products. Dairymen of the State have organized over 160 Cow Testing Associations, and Wisconsin is now the leading dairy State of the Union.

Thus it can be seen that our average production can very readily be increased by persistent efforts. The average production of this country is still much lower than some of our European competitors. We find, taken over the period of years that the average cow of this country is producing annually 2100 lbs. of milk less than the average cow of Denmark; 3,423 lbs. less than the average cow of Switzerland, and 4,058 lbs. less than the average cow of the Netherlands.

The policy of some of the breed associations has probably been partly responsible for the fact that we do not have a higher production average in this country, for while they have made some most astonishingly high individual records, the objective of many of our breeders of pure bred cattle has apparently been to make the largest possible records with a small number of their best cows, ignoring almost entirely the matter of improvement of the average production of the herd.

The low producers, the shy breeders, and the cows with unsound udders have been carefully sorted out and have not been tested along with the best producers.

To further emphasize the necessity of keeping records of production year after year, if we expect to bring about herd improvement, a survey of the cow testing association records of the U. S. has shown that only about 1-3 of the Pure Bred herd sires of the country have materially increased the production of their daughters over their dams. Of 200 dairy sires whose transmitting qualities have been studied by the Bureau of Dairying of the U. S. Dept. of Agriculture, the daughters of 61 produced 14.3% less than their dams. The daughters of 70 produced from 3 to 9% more than their dams, and the daughters of 69 produced over 36% more than their dams.

The members of the Nassau Milk Producers' Association have certainly made a splendid beginning in herd improvement in having purchased a fine block of Pure Bred Bulls, but it will be necessary to carefully study the production records of the daughters of those bulls to know which are actually transmitting the best dairy qualities. The slogan of a certain dairy sales association is a very good one to follow, "Buy good, breed better, get the best," or, perhaps, the slogan of another herd improvement association, similar to this one, is even better, "Give a good cow a chance—a new home for the boarder."

*Presented at the annual meeting of the Nassau Milk Producers' Association.

THE SOCIAL VALUE OF COOPERATION

By Raymond G. Bressler, Deputy Secretary of Agriculture, Pennsylvania Department of Agriculture

Cooperation and cooperative activities are the most pronounced and most significant of all the processes of group life. All economic activity is in its very nature cooperative. A recognition of need for cooperation as a fundamental factor is a prerequisite for success in any cooperative enterprise. In a discussion of the social value of cooperation, a recognition of that desire innate in the human animal to be among beings of his own kind and to enjoy the contacts arising therefrom, is fundamental. This fact is as certainly a need as is the necessity to unite in common action for defense or to join together in an association to better the economic status of the group.

The opportunity for social diversion, recreation—call it what you want—is inherent in all cooperatives, and oftentimes is a by-product more valuable than the main product, a side show more interesting than the main show. That great organization of farm folk, popularly known as the Grange, would long since have died had it not recognized as one of its cardinal objectives the providing of opportunities for social intercourse for the entire farm family.

Have Fun in Meetings

My guarantee for the success and continued existence of any local cooperative, except those that are held together by a dire economic necessity or religious fervor, is this: Make every membership meeting seventy-five per cent fun and twenty-five per cent business. I interpret fun broadly—music, recitations, stunts, games, speeches full of action, and the like. My old teacher of public speaking used to tell his class to be mentally in earnest to advocate a cause. But that is not enough. Physical earnestness is more important. The contagion that arises in your own body is soon caught by the group and the meeting is off to a good time. And how much easier it is to accomplish the things worth while when all are having a good time.

Leaders Must Have Nerve

It is commonplace these days to say that the leader is the most important member of the group. Surely so, or he would not be leader. Woefully unfortunate is that organization whose elected officers tag on behind the membership. No institution can long survive when such a situation exists. But even at

that any officer can make himself an asset if he will force himself to get the vision of the group. I have said many times to many groups: Given average intelligence, all that it takes to lead a body of people in any line, where group action is desired, is nerve. Nerve to stand before the crowd and call out the song, even though you can't sing a note, or to throw a book at the man in the group who isn't singing. Nerve to "holler" in your loudest tones for people to form in circles so that they can have a good time. In short, nerve to tackle the job and stay with it. That is the spirit which is lacking in too many cooperatives. Without it, cooperation will never become a part of the blood and fibre of the American people.

An Instance of Recreational Leadership

I saw a fine instance at the Crawford County Pomona Grange meeting last September, of the very thing I am talking about. It was a long program. There came a time when most of the people were in that twilight zone where they were neither awake nor asleep. Suddenly, a husky young Secretary stepped to the center of the room and blurted out, "Let's holler." Then he said, "I'll count 1, 2, 3, all ready, go."

But he forgot what he had planned to do. He started all right but at the end of 3 he let out an awful war-whoop, got embarrassed, colored like a beet and the group went wild with laughter. He stuck right to it. He rehearsed again. In a few minutes he had control of himself and the crowd and we all gave nine lusty Raahs loud enough to do credit to any college group. The meeting was on to a good second start all because one individual sensed a need and had the nerve to supply that need.

Pull Together

My plea to the membership of every cooperative, and especially to its leadership, is this: Use every method and means known to man to make your efforts count in common action. We speak glibly about cooperative action and the things that can be accomplished thereby. Even the Ancients achieved the mechanical expression of complete cooperative state. But we all lack woefully that spirit within the wheel that can move with power toward that stage where the principle of cooperation becomes a part of the very life stream of humanity.—(From Keystone Cooperation.)

PENNSYLVANIA DAIRYMEN'S ASSOCIATION HOLDS SUMMER MEETING

The Pennsylvania State Dairymen's Association held its first summer meeting at Pennsylvania State College, on May 6th, in connection with the Penn State College Dairy Exposition, held under the auspices of the Penn State Chapter of the American Dairy Science Association.

The meeting was held in the "Old Chapel," and was presided over by E. P. Fitts, President of the State Dairymen's Association.

Dr. R. D. Hetzel, President of the College, welcomed the visiting dairymen, while Secretary Robert F. Brinton responded to the welcoming address.

Professor A. A. Borland, of the Dairy Husbandry Department, made an interesting address, describing in part the functions of his department. He said in part, "Three courses are given, dairy production, dairy manufacture and bacteriology. Five major breeds of dairy cattle, totalling 125 pure breeds, are maintained on the dairy farm. Despite the use of many of these cattle for classroom and experimental purposes, they averaged 9444 pounds of milk and 382 pounds of butterfat during the last year and returned an average of \$849 above feed cost."

The college creamery contributed 250,000 quarts of market milk, 270,000 pounds of butter, 52,000 pounds of cheese, 24,000 pounds of cottage cheese, 22,000 pounds of condensed milk, 20,000 gallons of ice cream, 12,000 gallons of ice cream mix and 2,000 quarts of chocolate milk. A quarter-million dollars' worth of business was done last year and 70 per cent. of this amount was returned to farmers of the State College Community, who brought milk and cream to the College plant."

In conclusion Prof. Borland said, in referring to the value of an agricultural education to farmers, "A recent survey has shown that farmers without any schooling cleared \$680 a year, those who have attended common school, \$742; high school graduates, \$1208, and college trained farmers found their profit \$1,722 a year."

Robert W. Balderston, Secretary of the Inter-State Milk Producers' Association, in a brief address, referred to the more recent State and National Legislative enactments effecting the dairy industry. "The Lenroot-Tabor Act, a National law, which provided sanitary regulations for milk and cream imported into this country. The National appropriation of \$6,000,000 indemnity for bovine tuberculosis eradication were touched upon." He referred to the appropriation of \$2,000,000 for the same

purpose by the Pennsylvania State Legislature, and to the large appropriation by the Legislature for the Pennsylvania State College and to the \$8,000,000 referendum for a college buildings bond issue next Fall.

County Agent, J. W. Warner, discussed the great emergency hay crop, soy beans, while R. H. Olmstead made an address on silos and silage crops.

M. D. Munn, President of the National Dairy Council, Chicago, made an interesting address, while Dean R. L. Watts, of the School of Agriculture, spoke with interest of his recent globe encircling trip, in which he visited eleven different countries.

At the conclusion of the addresses, the Quality Control Department, of the Philadelphia Inter-State Dairy Council presented their mock trial, "Judge for Yourself."

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DIRECTORS' MEETING INTER-STATE MILK PRODUCERS' ASSOCIATION

The regular bi-monthly meeting of the Inter-State Milk Producers' Association was held at the association headquarters in the Boyertown Building, Philadelphia, Pa., on May 12th, 1927.

Those attending the meeting included H. D. Allebach, president; Frederick Shangle, vice president; R. W. Balderston, secretary; Robert F. Brinton, treasurer; S. K. Andrews, Ira J. Book, E. H. Donovan, E. Nelson James, J. W. Keith, H. I. Lauver, S. Blaine Lehman, A. R. Marvel, I. V. Otto, F. P. Willits, E. R. Pennington, J. A. Poorbaugh, C. F. Preston, Albert Sarig, C. C. Tallman, R. L. Tussey, Harry B. Stewart, S. U. Troutman, F. M. Twining, and A. B. Waddington.

Dr. James W. Kellogg, director-chief chemist, Bureau of Foods and Chemis-

try, Commonwealth of Pennsylvania, attended the meeting and made a brief address.

Secretary Balderston read the minutes of the previous meeting, the meetings of the executive committee of the Board of Directors and the list of expenditures made by the officers, since the last meeting of the Board, all of which were formally approved.

Robert F. Brinton, Treasurer presented a financial statement as to the association's worth as of May 1st, 1927, which was approved.

Following the discussion of general business matters a resolution was presented, providing that the next two meetings of the Board be held in the field—that is in the western and southern sections of the Philadelphia Milk Shed. This was presented from the view point that the members of the Board should be more definitely informed and advised as to the general conditions of milk production in all sections of the territory.

The resolution was adopted and it was decided that the first meeting be held in the western section of Pennsylvania, June 15th, being set as the date. A committee composed of directors Lehman, Tussey, Twining, and C. I. Cohoe and E. C. Dunning was appointed to make the necessary plans and arrangements. The meeting will be held in Bedford, Bedford County, Pa.

The plans for the eastern shore meeting will be definitely acted upon at the next meeting of the board.

President H. D. Allebach, presented the general viewpoint of market conditions throughout the milk shed.

The upward turn in production this spring has developed about a month earlier than usual and the supply therefore is in advance of other years. While this has had little influence on the supply going to the larger dealers, some of the smaller buyers have reported a slight over supply. On the whole, the general market conditions are good and the various receiving stations are taking milk freely, particularly if it be of high butter fat test. Consumption appears to be taking care of the increased supply although unfavorable weather conditions may have a tendency to weaken the demand.

Reports as to condition in the various producing districts were reported upon by all the directors present. Considerable interest in the growing activity of farmers toward the tuberculin test of dairy cattle, appears to be growing strongly all over the milk shed. Pasture conditions were reported good, the early rains together with a spell of warm weather has advanced the growth to a considerable extent.

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FARQUHAR POTATO DIGGERS

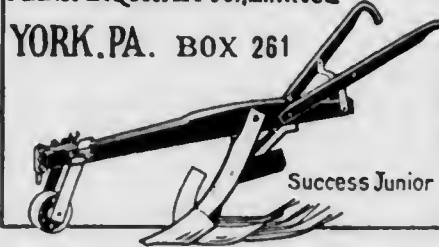
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SKIM MILK POULTRY FEED BEING MADE BY NEW PROCESS

Large quantities of skim milk formerly wasted or inefficiently used are being converted into a marketable product by a number of companies utilizing a process recently perfected by the Bureau of Dairying, United States Department of Agriculture. One company has sold more than a million pounds during the last year for poultry and hog feed. At Grove City, Pa., this manufactured product—concentrated sour skim milk—is made under the direction of department dairymen.

Briefly, the process consists of the use of a culture containing a mycoderma, which is a yeastlike organism, and an active culture of the bulgaricus type. When used in combination they are able to develop more than double the amount of acidity in the skim milk produced by ordinary lactic cultures alone. The use of this mixed culture has made it possible to create an acidity of 2 per cent in skim milk which when concentrated at the rate of 3 to 1 gives the finished product an acidity of 6 per cent. An acidity of 2 per cent removes the difficulties formerly experienced in concentrating skim milk in the vacuum pan, and 6 per cent acidity in the finished product prevents spoiling. The product has been kept in good condition for more than a year.

Concentrated sour skim milk is a pasty, semifluid product. As poultry feed it is mixed with water or dry mash. Good results are obtained with the product when fed to baby chicks in a dilution of 1 to 8; when fed to laying hens either in paste form or in a mixture of 1 pound of paste to 1 pound of dry mash; and when fed for crate fattening at the rate of 40 pounds of the paste to 100 pounds of mash.

The utilization of surplus skim milk in manufacturing this concentrated product promises a greater outlet to the dairyman for his products and assures the poultryman of a uniform supply of a good feed that has excellent keeping qualities.

APPROPRIATIONS FOR PENN STATE COLLEGE

In signing the Legislative appropriation bill of \$4,000,000 for the Pennsylvania State College, including \$1,000,000 for new buildings and their equipment, Governor Fisher requested that the first building item to be given attention by the college trustees be the reconstruction of "Old Main", the five story structure erected between 1858 and 1864. The top floor and attic of this building have not been used for about five years and the tower has been closed as unsafe for a longer period. The building now houses the general administrative offices and a large number of classrooms. The outer walls will be left standing as they are, the interior to be rebuilt entirely, according to present plans.

Other building needs will be given careful consideration by the executive committee of the trustees and by the board at its annual meeting during Commencement Week in early June.

The building request was granted in full by Governor Fisher. Lack of sufficient state funds prompted him to reduce the general maintenance item from \$2,181,000 requested to \$2,100,000; the agricultural extension amount from \$650,000 to \$630,000 and the agricultural research fund from \$403,500 to \$270,000. These amounts are to be used during the next two years.

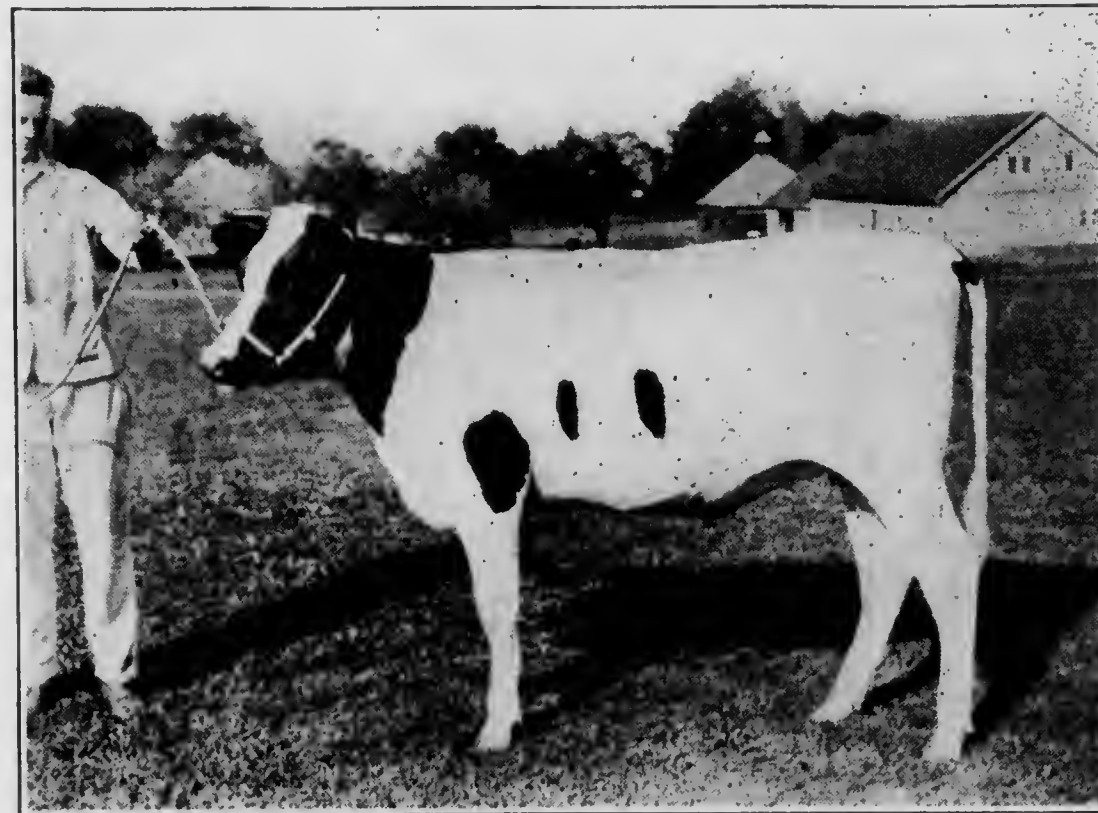
PENN STATE COLLEGE HOLDS DAIRY EXPOSITION

(Continued from page 1)

cheese. C. H. Munster, Altoona, received a fountain pen from the Gowing Dietrich Company.

Best among the amateurs was L. S. Cooley, Nicholson, who was awarded a fountain pen by the Gowing Dietrich Company and a five-year subscription by the Ice Cream Field for his supremacy in placing ice cream. T. R. Moyer, Chalfont, second best all-round judge, won a pocket thermometer given by the Dairy Supply and Equipment Company, Pittsburgh, and a fountain pen from the Gowing Dietrich Company, Syracuse, New York, for first place in

duction of clean milk. For this achievement he was honored with the award of the cup and medal presented by the Inter-State Milk Producers' Association, Philadelphia. L. E. Goodenough, Condersport; Ellsworth Heyser, Norristown; R. R. Peters, Phillipsburg, and P. P. Pecora, Hazleton, were the respective winners of the other four high places. They received prizes awarded by the Cherry Bassett Company, Philadelphia; Supplee-Wills-Jones Milk Company; the Penn State Dairy Science Association, and the State College Creamery. Twenty competed.



R. F. Mollenauer, and His Heifer, Who Won First Prize in the Showing Contest, Out of a Field of 37 Contestants.

cheese judging. L. L. Saphore, New Germantown, the best butter judge, was awarded a \$5.00 gold piece by the Supplee-Wills-Jones Milk Company. E. S. Pisle, Easton, best in tasting milk, received a subscription to the Creamery and Milk Plant Monthly. Eight participated in the professional group and thirty-five in the amateur class.

Stazewski Cleanest Milker

John M. Stazewski, president of the Penn State Chapter of the American Dairy Science Association, showed the way to his fellow students in the pro-

duction of clean milk. For this achievement he was honored with the award of the cup and medal presented by the Inter-State Milk Producers' Association, Philadelphia. L. E. Goodenough, Condersport; Ellsworth Heyser, Norristown; R. R. Peters, Phillipsburg, and P. P. Pecora, Hazleton, were the respective winners of the other four high places. They received prizes awarded by the Cherry Bassett Company, Philadelphia; Supplee-Wills-Jones Milk Company; the Penn State Dairy Science Association, and the State College Creamery. Twenty competed.

WINTER DAIRYING FOR BUTTER PRODUCTION IS INCREASING

A number of important changes in the production of dairy products during the period from 1917 to 1925 have been noted by T. R. Pirtle, dairy market specialist of the United States Department of Agriculture. One of these changes of importance to the milk producer is the increase in creamery butter production of 79.2 per cent during the period. Only 17.8 per cent of the total milk production of the United States was used in the manufacture of creamery butter in 1917, whereas the amount was increased to 25.54 per cent in 1925.

In this connection it is interesting to note that the seasonal trend of creamery butter production has varied during the period. If the year is divided into two parts, namely, the feeding season (November to April, inclusive), and the grass season (May to October, inclusive), it appears that the trend has been

toward an increased production of butter during the winter feeding season. In 1917 the proportion of creamery butter made in the feeding season was 36.1 per cent and in the grass season 63.9 per cent. In 1925 the production in the feeding season had increased to 39.9 per cent of the total output, leaving 60.1 per cent for the grass season.

These figures indicate that winter dairying for butter production is increasing. There was a sound reason for this change, says Mr. Pirtle. In Minnesota, for example, the average price of a balanced ration sufficient to produce a pound of butter in 1917, was 24.96 cents, and in 1925, 21.6 cents. The average price of 92 score butter in New York in 1917 was 42.7 cents per pound. In 1925 it was 45.3 cents. The feed cost had decreased 13.5 per cent while the price of butter increased 6.1 per cent for these two years.

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3. Spray Flit at night in milk bottling plant after you are through with the work, which avoids any possibility of imparting a taste or odor to milk. Kills flies. Better sanitation.

If you have never used Flit better get acquainted. *Be sure to get Flit—do not accept substitutes.* Send today for leaflet—"Proper Use of Flit in Dairies" and our special offer.

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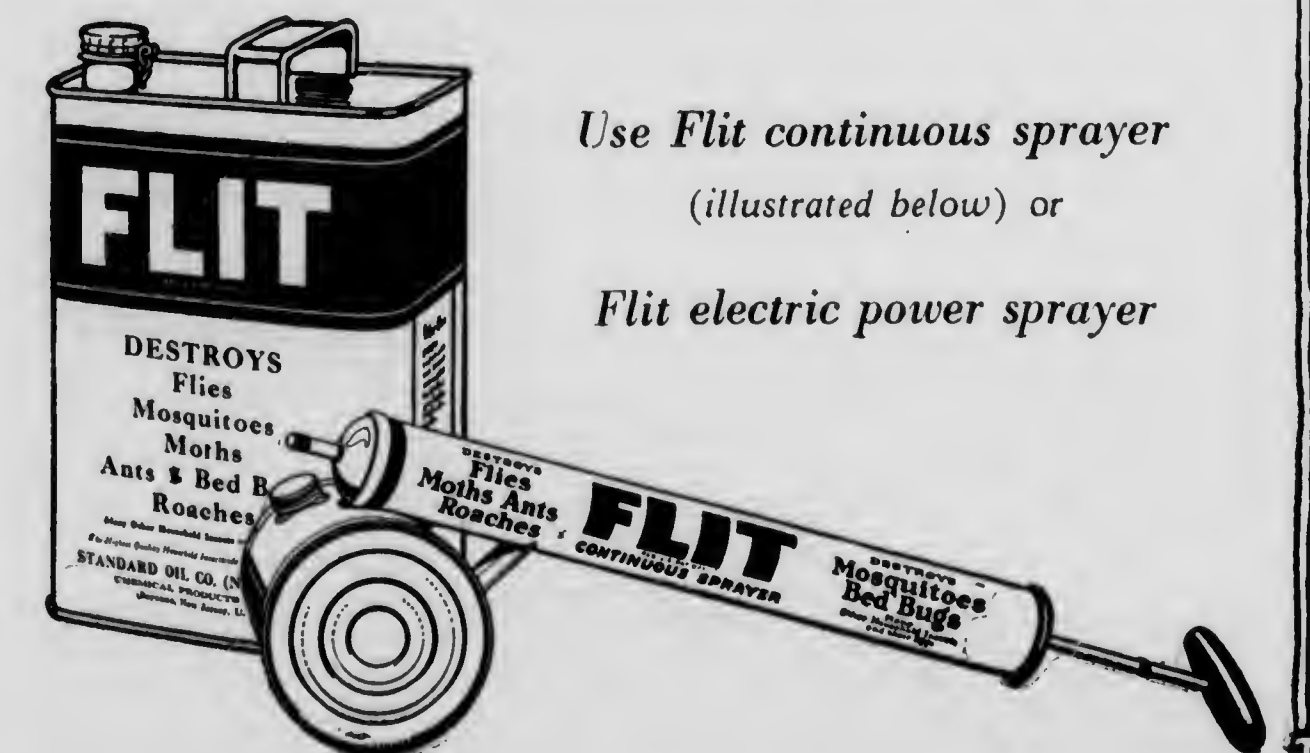
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"BEWARE OF IMITATIONS"

This is the safety first slogan of the commercial world, it tells us to "Stop, Look and Listen" before buying. We have been reminded so often and in so many different ways to "Beware of Imitations" that we have become a very wary group of purchasers. As connoisseurs of personal health and beauty, however, we have been a little more careless about exercising that precaution which we apply so intelligently to other things. Of course we know that:

"Little drops of powder
And little dabs of paint
Often make a lady
Look like what she ain't."

and yet we are inclined to be rather lenient in accepting an artificial complexion as the natural trade mark of health.

Every woman, regardless of environment or social status, desires to make the most of her personal charms. Is it not rather a strange psychology that compels the woman buyer to require full measure, genuine good value and absolute honesty from dealers, and then will allow her to try to fool the world regarding her own personal health and beauty by using imitation cosmetics? Is it not just as important to beware of imitations in people as in commercial things? But that we may be fair in our judgment let us review some of the genuine cosmetics at our disposal in order to determine whether or not imitations are necessary.

If one is embarrassed by a pale, unsightly complexion, rouge and powder from the drug store are very poor investments. It is fully as easy and convenient to secure a genuine cosmetic and surely it is no secret that:

Great big plates of carrots
And spinach by the peck
Help to make complexions
Pink and white, by heck!

The farm woman is indeed very fortunate for she has the source of health and beauty growing in the garden or grazing on the hillside. The farmers, however, work hard so they can supply an abundance of these precious beautifiers to the city. Therefore the city woman need not drag herself around in a languid and indifferent manner for:

Pears and prunes and oranges
And apples by the score,
Give you lots of vim and pep,
And paint your cheeks some more.

Nothing detracts from personal charm any more than bleary, dull, bloodshot eyes. There are many imitation eye-sparklers on the market. Please do not let them tempt you! They furnish only a temporary remedy and you would not think of choosing glass if you could have real diamonds. Therefore, remember:

Heaps of nice green onions,
With plenty of sleep at night
Cause dull eyes to open,
Sparkling, clear and bright.

Of course, it is only natural that one should desire a fashionable figure. It is considered, however, that the scales are the best judge of correctness along this line. What they tell you is a far better guide than your own wishes or the dictates of your fashion magazine. If you find your figure needs treatment apply to your garden and your grocer for assistance bearing this in mind:

(Continued on page 9)

HEALTH OF CHILDREN RESTS WITH PARENTS SPECIALIST ADVISES

"When people reach the age of 40 they begin to realize the value of the daily practice of health habits much more than they did when they were active and in abundant health at the age of 20," states Miss Dorothy Buckley, nutrition specialist for the National Dairy Council.

"That is why it is so important that youngsters make a practice of good health and the watching of the foods they eat a part of their daily life," she says. "When they know that it is important to build strong, rugged constitutions, older people will not need to admonish them about the future. Youth is so effervescent that it has little thought of the future."

Miss Buckley finds that parents who get the best results in teaching their children health lessons are themselves practicing it. Children are great im-

tators, so she says, and if they see father and mother brushing their teeth, eating the right foods, insisting on exercise and plenty of fresh air with long sleeping hours, they themselves are much more apt to make it a part of their daily habits.

"Parents should realize that if their children are examined by physicians at an early age, they have a wonderful opportunity to correct deficiencies, and to give them longer and happier years by playing with them the 'game of health.' If we expect children to enter into this health game and make it a daily practice, we older people must enter into it and co-operate with them."

And, Miss Buckley believes, as older people enter into the spirit of the game they catch the vivacity of youth again and themselves are surprised at the renewed vigor which results.

WAYS OF TEMPTING CHILDREN'S APPETITES

However adventurous children become at the dinner table as they grow older, as little folks they are very cautious about trying new dishes. Without appearing to coax them they must be led into forming vegetable-eating habits!

When introducing a new food start with very small amounts, until the taste for it is established.

Use pretty dishes and have the food attractively served.

Children love to have their own bowls and cups and saucers as well as spoons. A plate with an interesting picture in the bottom is often emptied promptly in order to see the picture underneath.

For cereals, individual moulds into which the cereal can be poured to cool, catch the child's attention.

It is often hard to persuade a little child to drink enough milk at meal time when there are newer dishes to sample.

Drinking through straws never loses its fun, and helps to consume many a glass of milk.

Giving the child his allowance of milk in an individual pitcher and then letting him pour it himself into his own cup is another useful device.

Putting a valspared picture in the bottom of the glass or using a tumbler of colored glass, flavoring the milk with vanilla or chocolate, or calling into play a glass measuring cup, so that the child can make a game of measuring the amount he drinks, are all suggestions readily made use of, at one time or another.

With the appearance of fresh vegetables on the table, many children have to cultivate a taste for these necessary elements in the diets.

So start with very small amounts, (this applies to any new food) and introduce one new vegetable at a time.

Vegetables may be served in the following ways:

1. Sliced and creamed.
2. Served with butter.
3. Combination of several (serve new vegetables with others which the child likes).
4. Vegetable cream soups.
5. Vegetable juices as clear soups.
6. Vegetable salads—simple dressings.
7. Jellyed vegetables.
8. Vegetable meat loaf.

The water in which vegetables are cooked contains food and should be used in soups and sauces.

Vegetable Meat Loaf

To one pound of meat (ground beef) add $\frac{1}{2}$ cup strained spinach, $\frac{1}{2}$ cup diced or ground carrots and $\frac{1}{2}$ cup tomato. Mix well and add one egg to keep the loaf together. Bake as an ordinary meat loaf.

Raw Vegetables in Gelatin

Follow directions for making gelatin or jello and add the following RAW vegetables when it is partially set:

$\frac{1}{2}$ cup scraped carrots (or ground)

$\frac{1}{2}$ cup ground raisins

$\frac{1}{2}$ cup cut celery

(The Infant Welfare Society of Minneapolis, Minn., have published the above helpful ideas in leaflet-form for distribution.)



SOME INTERESTING CHEESE DISHES

The Nutrition Staff of the Philadelphia Dairy Council, with a few guests, had the pleasure, on May 2nd, of hearing a lecture-demonstration by Marye Dahnke, a cheese specialist. Following the demonstration the Nutrition Department served an attractive lunch to the guests, consisting of sandwich loaf, cocoa, celery stuffed with cheese and Marguerites (meringue toasted on butter thins). The sandwich loaf is described on the back of card 85 in "Health Recipes."

Miss Dahnke demonstrated some very attractive salads, while explaining the varieties and uses for the different kinds of cheese now on the market.

American Cheese is the variety generally seen in grocery stores. It is sometimes incorrectly called American cream cheese but must be distinguished from the soft cream cheese put up in tinfoil covered packages.

"**Rat Trap Cheese**," as the old colored mammy called it, can be grated and heaped on a slice of pineapple or tomato with lettuce. It can also, as Miss Dahnke herself often uses it, be sprinkled over a bowl of vegetable soup. It adds a pleasing flavor to creamed cauliflower or macaroni, and many other dishes, once you learn to use it.

The **Soft Cream Cheese**, mixed with

a French dressing to add flavor and color, as well as soften it, is a most attractive garnish for salads made with various fruits, slices of canned pineapple or canned pears, peaches or apricots, decorated with cheese all were dishes which made one's mouth water.

The newest method is to use a pastry tube to make rosettes and curls of the cheese. Using the tube is also an easy way of stuffing dates or celery with cheese. A knife is, however, entirely practical when you don't have a tube.

In any salad made with the cream cheese, **Cottage Cheese** can be substituted very satisfactorily.

When a sudden spell of hot weather strikes you before you have changed your milk to summer quarters and your milk goes back on you, try making some cottage cheese and using it in a salad.

Turn to cards 23 and 24 in your Health Recipes and try, for instance, a stuffed Prune Salad, a Long Island Salad or a Combination of Cottage Cheese with canned pears or peaches from the fruit closet if it is not the season for fresh fruit.

A salad made with lettuce, fruit and cheese is a good beginning for a substantial meal. Add a glass of milk and a brown bread sandwich and you have a very satisfactory lunch.

BEWARE OF IMITATIONS

(Continued from page 8)

Both sweet and white potatoes, Can help if you are thin,
But if you're fat remember that,
You only eat the skin.
All the natural cosmetics are real beautifiers but are most effective when used in combination daily. There is one more, however, which is perhaps the most important of all. It is manufactured at the dairy farms and appears on the market in several forms. Those who are wise enough to choose this product soon discover:

Nice cream cheese and butter
Milk and pure ice cream,
Help to make a lady,
Like a fairy dream.
Those who have adapted the habitual use of the great natural beautifiers always recognize their trade marks which are vivacious eyes, sparkling teeth, soft hair, rosy cheeks, clear skin and cheerful visage. It is the spasmodic unpracticed users who are lured on by the desire to obtain immediate results. They do not stop to think that such results are only temporary and thus a waste of time and money. And so:
If you would make the most of life
In spite of limitations,
Just always be your natural self,
"Beware of imitations!"

AROUND OUR HOUSE

Hobbies for Housewives

The woman who works her fingers to the bone for her family may be pointed out as a model housekeeper, but she seldom has the time or energy to be an agreeable companion to her husband and children. If she plans her housework so that she has some time for a hobby, she may be able to make both herself and her family happier.

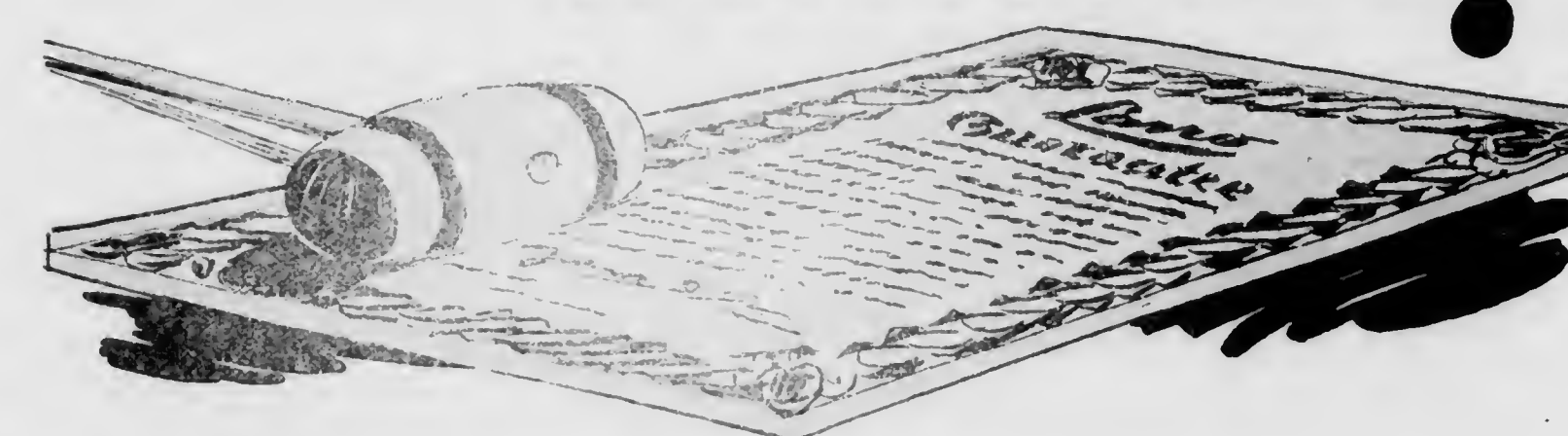
The hobby may be drawing, painting, sewing or interior decoration, for all have many applications in the average home, and when they are considered as a hobby instead of as a task they become much more interesting. Nature study and reading, for example, may be made particularly fascinating when children share in them. Gardening provides a chance to be out-of-doors, and it may yield attractive flowers for the house or food for the table as well. Even accounting may become a hobby for a woman who likes to juggle figures or is fond of buying. A hobby, pursued in an interesting way will often give a wholly different outlook on life and put a new zest into every-day living.

What Is A Good Home?

The needs of different people vary so much that a home which just suits one family might never do for another. The measure of a good home is the way the particular home meets the special needs of the individual family. A family which occupies its dining room only at meal time may want only the furniture and equipment necessary for the three daily meals; but a family which uses the dining room as a study, and general gathering place may want a bookcase, a desk and a few easy chairs there, too. One room is as good as the other if it meets the needs of the family. Those who are out of doors most of the day are likely to want quiet spots for reading and sewing at home; whereas the people who come from office or school may need a place to romp, a living room ready for impromptu parties, or a hall that will serve as boxing ring as well as a passage way. It isn't the number of rooms or the kind of furniture in a house that matters, it's the way these things answer the family's demands for a place to live and to share life together.

YOU be the judge

Your COWS the witnesses!



We don't ask you to take our word for Larro—or the word of any Larro dealer or any Larro user.

We don't ask you to study the Larro formula and compare pounds and percentages of this-and-that material with other feeds. We don't make claims for "digestible nutrients" that no one can prove or disprove.

We give you an opportunity to prove for yourself just what Larro will do for you by the only really conclusive

test you could make—in your own barns with your own cows.

More than this, we *guarantee* you satisfaction—for every Larro dealer is authorized to give you your money back if you are not satisfied with results after you have fed two bags of Larro to one cow. The milk pail will give you the strongest possible testimony that Larro quality and Larro uniformity mean real economy and dependable profit in the long run.

Ask the Nearest Dealer

THE LARROWE MILLING COMPANY
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'The SAFE Ration for Dairy Cows

Also a complete line of poultry feeds—as good for your chickens as our dairy feed is for your cows.

647

DAIRY COUNCIL SERVICE

The various departments of the Dairy Council are at your service and will assist you in planning

Educational Entertainment

for your Community, Local or Club Meetings.

Philadelphia Inter-State Dairy Council

R. W. BALDERSTON, Secretary

BOYERTOWN BUILDING
1211 Arch Street
PHILADELPHIA

NASSAU COMMUNITY HOLDS ANNUAL MEETING

(Continued from page 1)

vania and other similar communities. "Together with all these powers, our own M. C. Vaughn has constantly worked hand in hand. The success of every project has been due, in a great measure, to his tact, his untiring efforts, his never wearing patience, and magnetic personality. His leadership is essential to our progress."

Cow Testing Work

R. W. Balderston, Secretary of the Philadelphia Inter-State Dairy Council outlined the work of the Nassau Cow Testing Association during the past year. He said in part, "The Nassau Cow Testing Association was started one year ago, on a modified basis to meet the needs of the community, with comparatively small herds."

"The farmers themselves weigh their milk and feed. Semi-monthly samples of the milk were taken and these were tested at the milk plant, by representatives of the testing department of the Inter-State Milk Producers' Association, while the records and accounts were taken care of by the Quality Control Department of the Dairy Council. This co-operative work has proven quite satisfactory to all concerned. Twenty-five herds started the year's work and twenty-four completed the year."

"The best cow in the association was owned by Ferris Wilson. It made 521.6 pounds of fat and 10,178 pounds of milk. The income of Mr. Wilson from this cow was \$229.48. The average of Mr. Wilson's herd, which contained from 14 to 15 cows, was 356.4 pounds of butterfat and 6808 pounds of milk, testing 5.24. The highest individual herd average was that of Walter C. Phillips, whose herd of 4 to 5 cows had an average production of 419 pounds of fat from 7886 pounds of milk, testing 5.33. These herds deserve special mention, though there were a large number of very good herds in the Association."

One herd averaged above 400 pounds of butterfat.

Seven herds averaged between 300 and 400 pounds of butterfat.

Five herds averaged over 7000 pounds of milk per cow per year (of which 6 had better than 4% test).

Four herds had an average of higher than 5% test throughout the year and only one herd averaged below 4%.

Three herds returned over \$3.00 per \$1.00 feed cost.

Two herds returned over \$2.50 per \$1.00 feed cost.

Three herds returned over \$2.25 per \$1.00 feed cost.

Eight herds returned over \$2.00 per \$1.00 feed cost.

Of the twenty-four herds in the Association, 16 had an average return of 100% or more on feed cost.

There were many very good cows in the Association. As stated before the highest production of butterfat was 521.6 pounds. Since the majority of cows in the Association are the Channel Island type, the production of milk is even more creditable.

There was 1 cow in the 12,000-lb. milk class.

There was 1 cow in the 11,000-lb. milk class.

There was 1 cow in the 10,000-lb. milk class.

There were 4 cows in the 9,000-lb. milk class.

There were 15 cows in the 8,000-lb. milk class.

It is certainly very commendable for

an association in its first year to have made this splendid record.

F. M. Twining, in charge of the Field and Testing Departments of the Inter-State Milk Producers' Association, gave a very interesting talk on cow testing work in general, pointing out the lessons which, in this and other counties, show the value of the Cow Testing Association work in the improving of production per cow per dairy and in more economical production.

(This address is printed elsewhere in this issue of the Review.)

In a general discussion, lead by County Agent Vaughn, many interesting facts were brought out, many of which proved to be of exceptional local interest.

E. H. Donovan, of Kent county, Delaware, a Director of the Inter-State Milk Producers' Association, made a brief address, in which he touched on the general business policies and programs of that organization.

The evening session, following a dinner served in the Community Hall, included addresses by R. P. Robertson, of the Agricultural Committee of the Sussex Trust Co.; A. D. Cobb, State County Agent leader University of Delaware, and H. D. Davis, Supplee-Wills-Jones Milk Company, Philadelphia.

The meeting closed with the presentation of "Judge for Yourself," a mock trial, presented by the Quality Control Department of the Philadelphia Inter-State Dairy Council.

NATIONAL DAIRY EXPOSITION

The twenty-first annual National Dairy Exposition will be held this year in Memphis, Tennessee, in connection with the Tri-State Fair. The dates on which the exposition will be held run from October 15th to 22nd.

Arrangements have been made by the Exposition and Fair associations whereby the two events will be combined for the year in one big agricultural exposition. The large cattle barn will be devoted entirely to dairy cattle entered in the Exposition and a judging arena will be provided immediately adjoining the barn. The farm and barn machinery and equipment exhibits will be housed in a commodious building which is being designed for this purpose. It will be large enough to contain the United States Department of Agriculture display, dairy products exhibits, boys' and girls' club activities and other educational features of the Exposition.

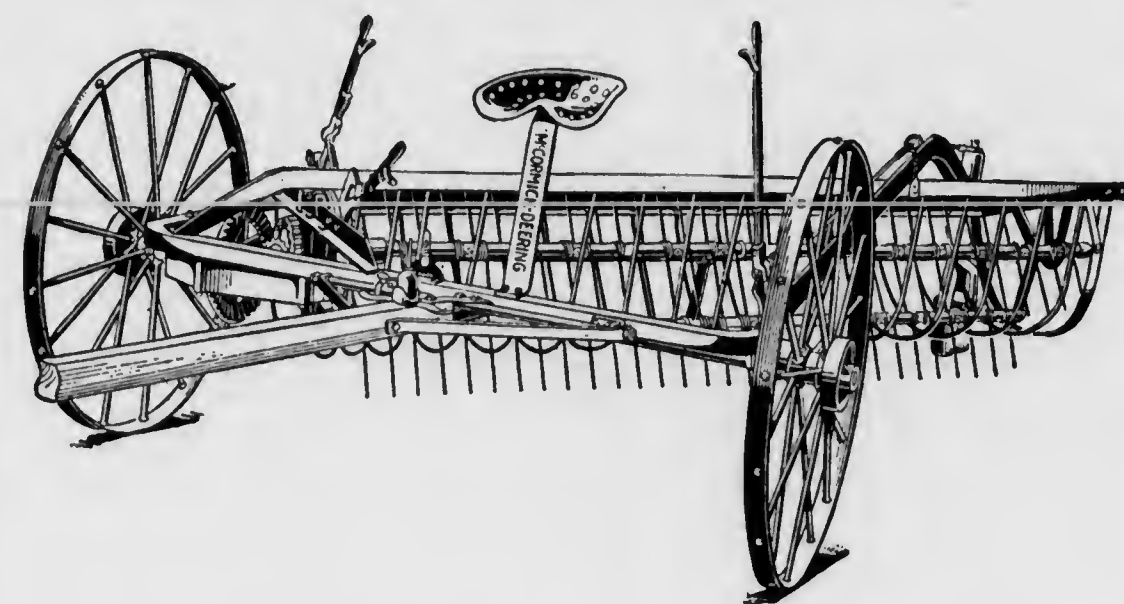
The Executive Committee of the National Dairy Association decided to hold the Exposition in the South this year because of the rapid development of dairying and the demand for diversified agriculture in that section. Assurance from all interests having at heart the advancement of agriculture promise a wonderful exposition which will be of great and lasting service in the agricultural development of the South.

IMPROVE DAIRY HERD

Choose your next herd sire very carefully. No improvement in the herd is possible without bringing in some better blood. If a better herd is wanted in the future something must be done about it now. If you do not understand pedigrees get someone to help make the selection.

Keep the poultry house clean and the birds are more likely to keep healthy.

Two Jobs Done With One Machine

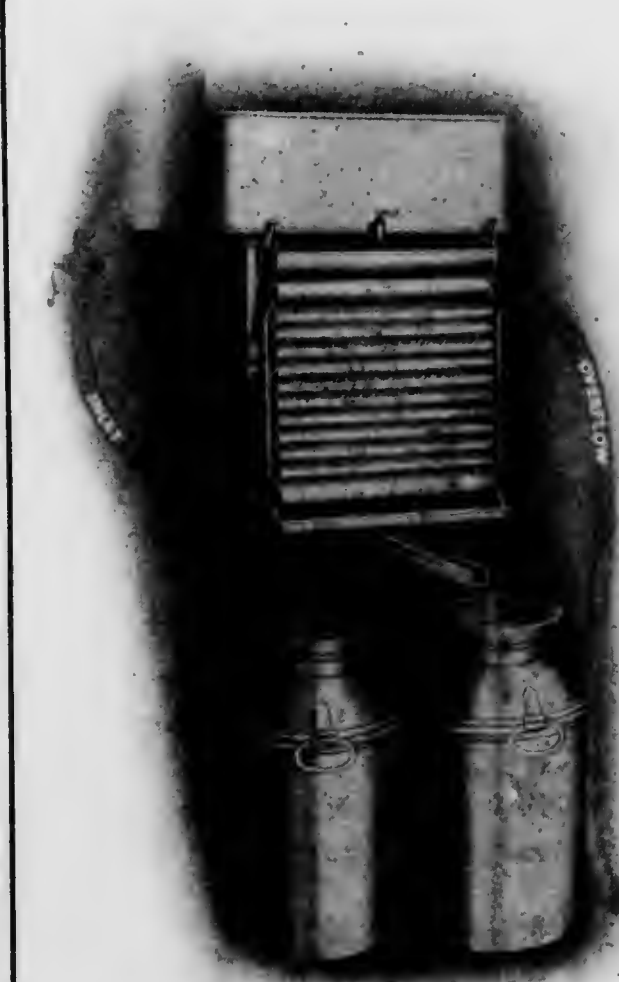


In times not very long ago after cutting hay it had to be tedded with one machine and then raked with another. Now both jobs are done with a McCormick-Deering side rake and tedder. Simply shifting a lever reverses the direction of the rotation of the raking cylinder and makes the machine a tedder.

You will find this machine, and other McCormick-Deering hay tools—such as Loaders, and Mowers—great labor and time saving devices during your hay harvest.

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516-24 N. Calvert St.
Baltimore, Md.

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FARQUHAR DAIRY BOILER

will help you produce certified milk. Farmers and Dairymen have found this Boiler most convenient, easily and quickly steamed and by virtue of its interior arrangement, it is most economical. Just the Boiler for sterilizing, heating water, cooking feeds, heating molasses for mixing sweet feeds, etc.

Built in full accord with the American Society of Mechanical Engineers' Code and meets every requirement of the state of New York, New Jersey, Delaware, Pennsylvania and Maryland. A great time and labor saver. Helps to get that higher price for milk. Write for complete specifications and rock bottom price.

A. B. FARQUHAR CO., Limited Box 461, York, Pa.

COW TESTING ASSOCIATIONS

DATA FROM MONTGOMERY COW TESTING ASSOCIATION, Compiled by L. O. Sidelman

The Montgomery Cow Testing Association finished its third year May 1st, 1927, with twenty-one whole year members. There were 375 cows in the association during all or part of the year.

The Results for the Three Years Testing is as Follows

Year	Ave. No. Cows	Lbs. Milk	Lbs. Butterfat
1925	331.65	7,563	281.2
1926	330.10	7,789	295.9
1927	319.10	7,991	305.3

The Results for Members is as Follows

Total Ave. No. of cows in the association	Lbs. of milk	Lbs. Butterfat
319.10	7,991	305.3
Ave. per cow:	Lbs. of milk	Lbs. Butterfat
319.10	7,991	305.3
Value of product	\$299.10	
Cost of pasture	12.06	
Cost of roughage	52.12	
Cost of grain	60.82	
Total cost of feed	125.00	
Value of product above feed cost	174.10	
Returns for \$1 expended for feed	2.39	

Individual Herd Records

Twelve herds with an average of 5 or more cows exceeded an average production of 800 lbs. of butterfat. A complete list of these herds follows:

Owner's Name and Address	Ave. No. Cows	Breed	Lbs. Milk	Lbs. Fat
Wm. H. Landis, East Greenville	18.75	R.H.	11,994	428.9
Ursinus College, Collegeville	14.50	R.H.	10,834	374.0
Levi Schultz, Est., Palm	13.92	R. & G.H.	9,685	342.3
Warren G. Schultz, East Greenville	13.25	R. & G.H.	9,269	329.3
Owen S. Gerhard, Palm	21.33	R. & G.H.	9,313	323.8
Miss L. T. Morris, Chestnut Hill	11.67	R.J.	5,531	319.7
Hartman & Weinberger, Palm	13.58	R. & G.H.	8,886	319.3
O. M. Woodward & Son, Pennsylvania	9.42	R. & G.H., R. & G.B.S.	7,401	318.5
Mrs. W. B. Saunders, Bryn Mawr	18.00	R. & G.H., G.A.	8,251	311.4
Mrs. Howard Bieler, East Greenville	13.67	R. & G.H.	8,759	305.1
H. D. Allebach, Trappe	15.17	R. & G.H.	8,630	302.8
A. K. Rothenberger, Lansdale	17.25	R. & G.H.	8,579	300.5

Individual Cow Records

The following is a grouping of all cows producing over 300 pounds of butterfat. These are grouped as follows:

Group 1—Above 900 lbs. butterfat	1 cow
2—Between 800-900 lbs. butterfat	1 cow
3—Between 700-800 lbs. butterfat	2 cows
4—Between 600-700 lbs. butterfat	21 cows
5—Between 500-600 lbs. butterfat	111 cows

Total 136 cows

Twenty-five cows produced over 400 lbs. butterfat during the year. Complete list follows:

Owner	Cows' Names	Breed	Age	Lbs. Milk	Lbs. Fat
Wm. H. Landis	678091	R.H.	7½	22723	924.9
	801600	R.H.	4½	14232	629.3
	22	R.H.	7½	11957	517.5
	833428	R.H.	4½	12639	513.2
	409471	R.H.	9½	13860	470.2
	837650	R.H.	4½	14027	457.2
	449291	R.H.	9	12585	430.9
	837852	R.H.	3½	10443	424.2
Ursinus College	627890	R.H.	6½	15160	495.6
	985767	R.H.	2½	15409	498.6
	610431	R.H.	9½	15361	483.8
	554437	R.H.	7½	11273	435.5
Mrs. W. B. Saunders	Susan	G.A.		10892	456.1
	Flossie	G.A.		10799	412.0
	753382	R.H.	4½	13218	406.7
	638693	R.H.	5½	12858	401.4
O. M. Woodward & Son	10812	R.B.S.	8	9804	435.1
Miss L. T. Morris	657491	R.J.	3½	8133	434.9
	657493	R.J.	3½	6238	429.3
	539478	R.J.	8½	7481	406.4
Levi Schultz, Est.	678889	R.H.	6	11751	426.4
	722777	R.H.	4½	11407	410.1
Hartman & Weinberger	Jumbo	G.H.		10630	419.9
Vincent B. Alderfer	493999	R.H.	8	11367	419.8
Mrs. E. F. Rieger	127758	R.G.	5	7754	411.2

A registered Holstein cow owned by Wm. H. Landis of East Greenville, "Greenhill Bellwood Hengerveld", had following high productions for last two years.

Year	Lbs. Milk	Lbs. Butterfat
1926	19,707	791.3
1927	22,723	924.9

This is the second cow in Pennsylvania cow testing associations to pass the 900 pound mark in production of butterfat. In 1921 Mr. Young in Somerset County had a registered Holstein cow that produced 925 pounds of butterfat.

R. G. Waltz, County Agent. F. E. Martin, Cow Tester in Charge.

If you believe a dollar saved is a dollar earned, try borrowing money at the bank at the rate of six per cent a year so you can take advantage of the ten per cent discount for cash within ten days.

Ninety-five per cent of the statements about probable future trends in agriculture published in the 1925 and 1926 outlook reports of the bureau of agricultural economics at Washington were borne out by later developments.



La Belle of Cress Lawn
Official record milked three times a day, 13,643 lbs. of milk, 649 lbs. fat. Farm record next year on Amco 24% Universal, milked twice a day, 15,990 lbs. milk.

Farm care and AMCO FEED bettered her official record

MEN handling cows on official test always give them the best of care. Handled this way and milked three times a day, LaBelle of Cress Lawn made an official record of 13,643 lbs. of milk, 649 lbs. of fat, as a three-year-old.

The next year her new owner, E. Baker Pyle, gave her only ordinary farm care and milked her twice a day, but he fed her Amco 24% Universal and some corn and oats. She made 15,990 lbs. of milk. This is an increase of 2347 lbs. of milk in her record as a four-year-old under ordinary farm care which, as Mr. Pyle says, "is something to the credit of the feed." Another cow in the herd exceeded her official record by 442 lbs.

No cow in Mr. Pyle's herd produced less than her official record. Mr. Pyle's letter follows:

American Milling Company
Peoria, Ill.
I have been using Amco Open Formula feeds for three years previous to this with excellent results. In that period I have never had a cow off feed from overfeeding.

I keep accurate account of what each cow produces and find that our herd of sixteen registered Guernseys averaged 8970 lbs. of milk last year and seven were two-year-old heifers.

LaBelle of Cress Lawn (116993), A. R. record, 13,643 lbs. of milk, 649.28 lbs. fat, Class D, an outstanding cow in our herd, produced for me 15,990 lbs. of milk, exceeding her official record by 2347 lbs. of milk. This cow consumed as high as 18 lbs. of Amco 24% Universal and 6 lbs. of corn and oats a day and never refused to eat.

Imp. Queen Mary of Sunnyside (47194), another wonderful cow, with three A. R. records, produced for me 10,880 lbs. of milk, exceeding her official record by 442 lbs. of milk. All my other A. R. cows produced equal to their A. R. records which is something to the credit of the feed. As all official records were done with three milkings per day and ours on two per day, I would recommend the Amco Open Formula feeds to any dairyman who is looking for the best.

E. BAKER PYLE

Phoenixville, Pa.
R. F. D. 3

Amco 20% Dairy is suggested for feeding on pasture this summer. Ask your Amco Agent for it. Fed liberally, it will do these three things:

1. Make you more milk this summer.
2. Make you more milk for the same amount of feed next winter
3. Keep the flesh on your cows this summer.

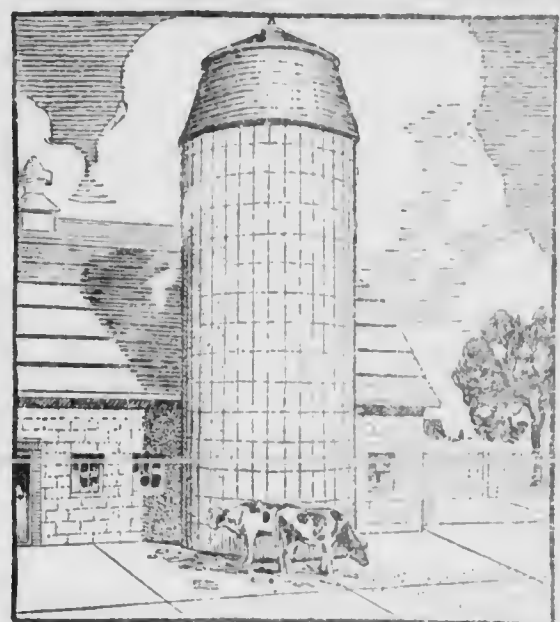
DIVISION OFFICE: MUNCY, PA.

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Executive Offices: Peoria, Ill.

Plants at: PEORIA, ILL.; OMAHA, NEB.; OWENSBORO, KY.
Alfalfa Plants at: POWELL, GARLAND, and WORLAND, WYO.

June Pastures in January



Silage is a winter feed fully as succulent and palatable as that in June pastures.

Eleven per cent More Milk—build a Concrete Silo

Tests at the Vermont Experiment Station showed that a ration including silage produced 11 per cent more milk than the same amount of dry corn fodder.

More milk during season of peak prices means more profit.

"Concrete Stave Silos." Our free booklet tells the whole story. Write for your copy.

PORTLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete

1315 Walnut St., Philadelphia

Concrete for Permanence

ESCO MILK COOLING BOX

Keep Your Milk below 50 degrees



Sizes to accommodate 2-14 cans

Make Low Bacteria counts—Increase profits

We furnish either the complete outfit or just the cooling unit installed in your own concrete cooling box. Full specifications and price sent on request.

Eastern Sales Company, Distributors
140 East Market Street West Chester, Pa.

Mention Milk Producers Review when writing advertisers

PENN STATE COLLEGE OWNS WORLD'S RECORD JUNIOR FOUR YEAR OLD AYRSHIRE

A new world's Roll of Honor record for junior four-year-old Ayrshires has been set by the Pennsylvania State College heifer, Sir Robert's Romona Bell that has just completed a ten-month record of 14,744 pounds of milk, 570.42 pounds of butterfat. In addition to this liberal production this young cow fulfilled her Roll of Honor requirements by dropping a splendid bull calf by Penshurst David.

This is not the first good record of this heifer, for as a two-year-old she made the highest junior two-year-old record of the year with 12,861 pounds of milk, 555 pounds of butterfat, which won for her the French Prize Cup trophy. As a two-year-old Sir Robert's Romona Bell was shown at the New Jersey State Fair where she was placed second.



Sir Robert's Romona Bell was born at the Masonic Homes Farm, Elizabethtown, Pennsylvania, who presented her to the Pennsylvania State College, as one of a group of select foundation animals presented by the Ayrshire breeders of the Keystone State to their state college. This heifer is a very well-bred individual, and is by the proven sire, Penshurst Sir Robert, that has eight Advanced Registry daughters that average 10,735 pounds milk, 433 pounds fat, and six Roll of Honor daughters with an average of 10,014 pounds milk, 410 pounds fat. Penshurst Sir Robert is by Netherlon Statesman, an imported bull that was used at Penshurst Farm where he sired thirty-two daughters with forty-one records that average 9,869 pounds milk, 396 pounds fat.

Sir Robert's Romona Bell is out of Romona Bell that gave 9,931 pounds of 3.94% milk, 392 pounds fat for the Advanced Registry. Her sire, Finlayston Bell, traces to the well-known "century sire" Finlayston. Finlayston Bell sired twenty-three daughters that average 10,259 pounds milk, 405 pounds fat on forty-one records, and one proven sire.

Professor A. A. Borland, in charge of the Dairy Department, and Dairy Herdsman P. D. Jones are to be congratulated for the excellent results that they are securing with the institutional herd.

ADDS A NEW MAN

George H. Hamman, Jr., Downingtown, Pa., who is the son of a former progressive Chester County, Penna. dairyman, will join the Quality Control Department on June 1st, replacing Dennis A. McCarthy, who was recently transferred to the National Dairy Council in Chicago.

Mr. Hamman received his practical dairying experience on his father's farm near Downingtown, Pa., and later at Marshallton, Pa. His technical training was received at Pennsylvania State College. For the past two and a half years he has been the tester for the West Chester Cow Testing Association and is highly recommended for his new position by members of that association.

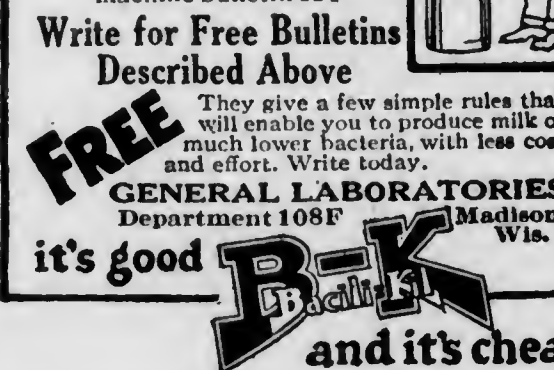
Keeping Milk Sweet with the aid of B-K Rinse

Keeping milk sweet means preventing bacterial growth. 85% of such bacteria result from contact with non-sterile utensils and cans. 95% can be destroyed by just using the cheap, quick B-K final rinse. Send for our milk can bulletin 928.

Separators
Every part touched by milk is coated by an invisible film of casein and other matter on which germs breed, and which ordinary washing does not remove. B-K dissolves the film and destroys 95% of the bacteria. Send for our separator bulletin 112.

Milking Machines
After each milking, wash milking machine parts and keep in dilution of B-K and water. Then to prevent possible spread of infection from cow to cow while milking, rinse cups and tubes in a pail of B-K dilution after milking each cow. Send for our milking machine bulletin 124.

Write for Free Bulletins Described Above
They give a few simple rules that will enable you to produce milk of much lower bacteria, with less cost and effort. Write today.
GENERAL LABORATORIES
Department 108F Madison, Wis.
it's good B-K and it's cheap



HOLSTEINS predominate in thirty states and comprise nearly 50 per cent of all dairy cattle in the U. S. Wise distribution makes selection easy, wide demand assures a ready market.

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NORTHERN YORK COW TESTING ASSOCIATIONS

Dairy improvement work in York county, Pennsylvania, received a real impetus in the organization of the Northern York County Cow Testing Association on January 1.

The systematic checking on the work of individual cows in the herds of members has already resulted in a considerable shift in cows and in changes in feed and management. Inferior cows are being weeded out as they are discovered and the better cows are given more feed and better care in order to fully utilize their superior working



Wm. F. Schaefer and His Novel Cow Testing Association Advertisement

ability. Several pure bred sires of good breeding have been purchased by association members. There has been an increase in the number of members, and in the number of cows tested each month since the association started. The number of cows giving more than 1000 pounds of milk has also materially increased each month.

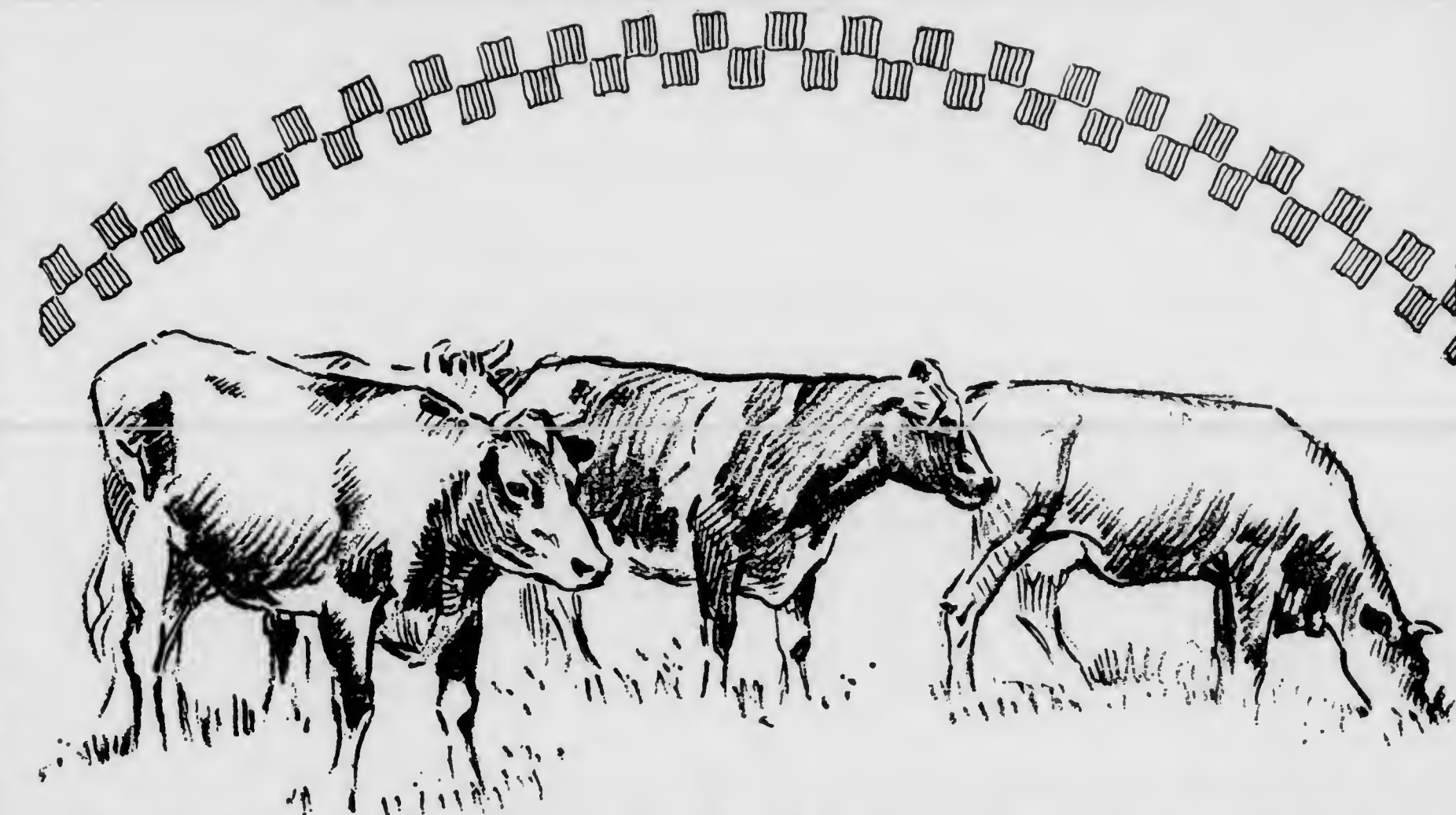
William F. Schaefer is the tester in charge. The progress made in the association is very largely due to the interest he takes in the work and the service he renders. Mr. Schaefer takes pride in his work and believes in advertising. The accompanying photograph shows the tire cover on his automobile adorned with a cow and a suitable inscription calling attention to the association and its work. There should be marked dairy progress throughout that section of York county in which the association operates.

IMPROVE DAIRY BARN

Now is the season to look over the dairy stable and see what improvements or changes can be made that will lessen labor or increase the comfort of the cows. Less labor decreases costs and greater cow comfort increases yields and profits.

The largest item of expense in the stock business is the feed bill. Success in this business is largely determined by how cheaply and how well the animals are fed, and this fact probably always will be true.

The proper use of a silo would make a great saving in the feeding program during the spring. The old wasteful method of leaving the cornstalks in the field should pass out with other uneconomic practices. The threat of the corn borer, now well established in Ohio,



FREE ROUGHAGE SEASON is here!

HOORAY! Now it will cost only half as much to feed the cows, because you won't have to feed them costly roughage.

Good pasture is better roughage than any hay or silage you ever fed, and Cow Chow balances with it to make an ideal summer ration.

Of course you're going to feed Cow Chow on pasture because it means—

- 1—More milk now
- 2—No summer slump
- 3—Better milking cows next fall

Order Cow Chow from the store with the checker-board sign.

PURINA MILLS, 854 Gratiot Street, St. Louis, Mo.
Seven Busy Mills Located for Service

Write us for a Purina Cow Booklet—free



BETTER FEEDING MEANS SUCCESS

A. L. Haecker

New York, Ontario and other states, is a reminder that we must use preventive methods, and the silo is a way to combat the spread of the insect.

The principal use of corn is for feeding domestic animals, and its greatest economy is in the form of silage. Those who waste half of their crop should not complain of hard times and low profits.

The silo either is or is not an economic means for feeding cattle. If it is not, then every agricultural college and experiment station has been wrong in all

these scores of experiments and feeding tests; then the best stock farmers of our nation have been in error for 30 years, and more than half a million of our most progressive stock farmers have made a grave mistake. I think all will agree that they have not. Then why not a silo?

There are two principal excuses for not using the silo. One—the most common, "Too much work to fill them." The other, "Can't afford to buy one." Briefly answering these excuses—we

must admit that the first is a case of laziness. It is no harder to fill the silo than to do any other kind of farm work such as harvesting, haying and threshing, etc. Answering the latter, I believe every banker understands the economy of the silo and any farmer with credit can obtain a loan to put up an equipment that will pay from 60 to 100% a year. A good argument by the tenant will convince most land owners that they would be wise to equip their farms with silos.

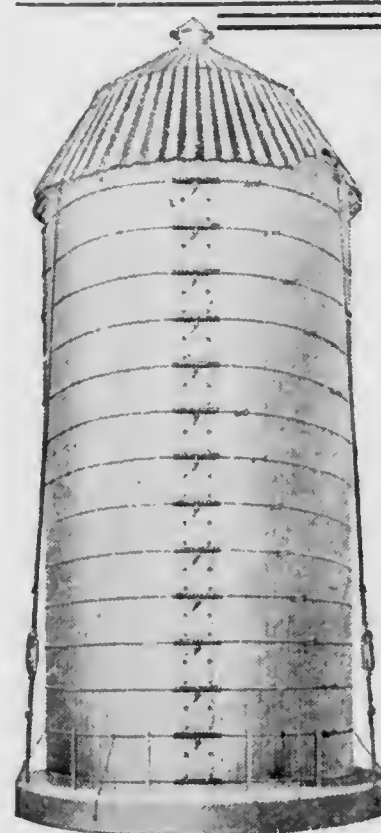
MARSHALLVALE GUERNSEYS

Herd Sire, Confident Senator 95001, by Lone Pine Senator 59906 AR, a double grandson of Imp. King of the May.

Heifers and bulls for sale, some of them out of AR cows with good records. All are registered and tested, Federal Accredited herd. Come and make your own selections, prices are reasonable.

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Kennett Square, Penna.



Why Not Buy The BEST SILO Possible To Put On Your Farm?

We will sell you a **TORNADO SILO** made of **BEST GRADE OF OREGON FIR LUMBER**, absolutely clear of **KNOTS** with all latest equipment:

Our big Hip Steel Roof and Steel Chute
—**GALVANIZED**

Our **DOUBLE Anchor System**
Our **CONTINUOUS DOOR System**

A SILO that will **KEEP** your **SILAGE** always in **PERFECT CONDITION** the year round. Why buy a Silo made of ordinary lumber full of knots, when you can have this one for the **SAME MONEY**? You will appreciate the **BIG SAVING** of a SILO this YEAR. Write now for **PRICES**, etc.

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EVERYTHING THE DAIRY AND POULTRY NEEDS

Vegetable and Farm Seeds, Garden and Farm Implements, Alfalfa Drying Racks 85c each, F. O. B. Factory, Something new for curing Alfalfa; DeLaval Separators, Sanitary Milking Pails, Cans, Strainers, Stable Equipment, Pumps, Etc.

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Established 1893 Terms—Cash on Delivery You Save the Difference

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MERCER DAIRY AND POULTRY FEEDS

A Postcard will bring you samples and prices, and we will appreciate the opportunity to quote on any quantity without urging you to buy

Delivery if desired at \$1.50 per ton within a radius of 20 miles
Custom Grinding and Mixing

When your truck is unloaded your grist is ready

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Telephone Lawrenceville 121

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CHANGING FOOD REQUIREMENTS ARE HARD ON FARMERS

By W. M. Jardine, Secretary of
Agriculture

Agriculture has in the last few years faced problems of unparalleled difficulty. It has encountered the necessity of adjusting itself to new conditions. Deflation following the war is one difficulty. Another difficulty is found in the changing food habits of the American people. In 1907 the average meat consumption per capita was 159 pounds. In 1925 it was 143 pounds. This difference, spread over the population of the nation, is the equivalent of 2,990,000 beef carcasses.

In 1910 we consumed 302 pounds of wheat per capita. In 1925 the figure was only 255 pounds. This reduction means for the United States as a whole approximately 88,000,000 bushels. This is nearly as much as the total annual wheat production of an important wheat state, such as North Dakota.

Changes of such magnitude require careful adjustment of agricultural production. This is not an easy matter, inasmuch as the farm business of the United States is divided into six and a half million units. Farmers cannot make adjustments in the comparatively simple way in which they can be made by industries concentrated into a few units.

Yet farmers are making these adjustments in a manner that speaks exceedingly well for the intelligence of our agricultural population. Minnesota, for example, has turned extensively to dairying, and a large cooperative association, including 73,000 members, established and managed by farmers in that state and in Wisconsin, has made a remarkable record in efficiency of both production and marketing. The farmers of that cooperative receive approximately 85 per cent of the price paid by consumers for their products.

For the last half century New England farmers have been making shifts in production in order to have an agriculture which meets conditions of soil and climate and also the demands of the market. From 1880 to 1925 the amount of farm land in New England diminished 25 per cent, but the present acreage, used for crops adapted to the effective demand, is doubtless more profitable than the increased acreage of 45 years ago—(Agricultural Review.)

NEW QUALITY CONTROL MAN

Ira L. Yoder, a senior student in Dairy Husbandry, at the Pennsylvania State College, will join the forces of the Quality Control Department of the Philadelphia Inter-State Dairy Council, at the conclusion of his college course.

Mr. Yoder was born and raised in the Oley Valley, in Berks county, Pa. He graduated from the Oley High School in 1922. He entered Penn State College in 1923, and will graduate this month.

FEED COWS GRAIN

Cows on pasture need grain. Do not plan to take grain from them as soon as they are turned out. Pasture is a succulent, watery feed and does not contain sufficient nutrients to keep a cow in flesh and milking heavily at the same time.

One of the most profitable forms of permanent improvement on a farm is to drain the low, wet places in otherwise entirely tillable fields.

Buy Early-- Avoid the Rush

Save yourself the disappointment and trouble of late delivery, the hurried erection and improper adjustment of your Unadilla Silo. Order NOW and get the benefit of a real good discount.

Cash brings you a liberal discount which represents real earnings, since it is money that you actually keep in your pocket.

Don't put off making this saving. You get all the superior qualities of the famous Unadilla at a price that can't be equaled at a later date.

Our handsomely illustrated catalog will tell you the Unadilla story in detail. It's well worth sending for.

Read too, about the construction and value of our water tubs, storage tanks and vats.

UNADILLA SILO CO.
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UNADILLA SILOS

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Storage Battery and Service Station

Starting, lighting, ignition—storage batteries of every description, make and for every purpose are recharged, repaired and rebuilt here by skilled battery men working in a fully equipped and stocked shop.

OUR SERVICE is unbiased and dependable.

Pusey & Young Storage Battery Station

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100—Dairy Cows—100

AT PRIVATE SALE
PREEHOLD, N. J.

Choice

Guernseys Holsteins Jerseys TUBERCULIN TESTED

These cows are sold subject to 60 day retest and fully guaranteed for anything you ask for. These cows are the best money could buy and you take no chances whatsoever when you buy here. They are priced to sell.

JACOB ZLOTKIN
Phone 330 FREEHOLD, N. J.



Build with Concrete

for economy and permanence. Get a better mixture and do away with hard hand labor by using a Peerless Concrete Mixer.

Built in 2 sizes for farm use. One H.P. engine will operate. Built strong but priced low.

Write for catalog A.M. DELLINGER, Lancaster, Pa.

Poultry Wire—Special Cash Sale
2 in. Mesh—1 ft. roll, \$1.10; 1 1/2 ft., \$1.75; 2 ft., \$1.95; 3 ft., \$2.75; 4 ft., \$3.65; 5 ft., \$4.50; 6 ft., \$5.29.
1 in. Mesh—1 ft. roll, \$2.65; 1 1/2 ft., \$3.90; 2 ft., \$4.90; 3 ft., \$5.65; 4 ft., \$6.95; 5 ft., \$10.95; 6 ft., \$12.95.
Galvanized after weaving, 150 ft. rolls.
Satterthwaite's Seed Store
16 N. Warren St., Trenton, N. J., Phone 8278

\$25 Kennedy Utility Saw

Will cross-cut, r.b., plane, groove and tongue plough, split, level, bore, and rabbet, make mortises, etc.
E. M. KENNEDY, 131 N. 7th St., Phila., Pa.

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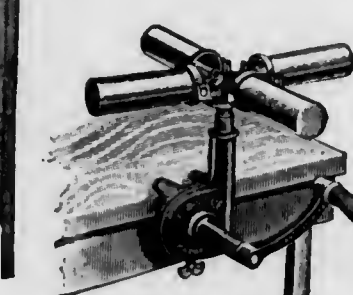
Thermometers



Wash Tanks



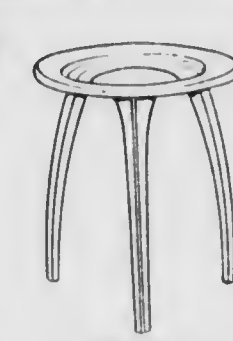
All Kinds of Cattle Instruments



Babcock Cream Testers



6-Can Milk Can Sterilizers



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Cherry-Bassett Company { 2324 Market St. } { Russell & Ostend Sts. }
PHILADELPHIA BALTIMORE

HIGH AGRICULTURAL COUNTIES IN PENNA.

Lehigh county had the highest value of crops per farm of any county in 1926. Lancaster led in total production of corn, wheat, tobacco and hay; in number of cattle on farms; in number of chickens on farms and eggs produced; and in number of farms having automobiles and tractors.

Berks produced the most oats while Lawrence and Beaver counties secured the highest yield per acre.

Philadelphia county produced the most wheat and corn per acre.

Berks county led in production of rye. Bradford raised the most buckwheat while Adams secured the highest yield per acre.

Adams county produced more than 1,500,000 bushels of apples, 500,000 bushels more than Franklin, the second highest.

Franklin county produced 187,000 bushels of peaches, 34,000 bushels more than Allegheny, the second leading county.

Montgomery county produced the most pears.

Lehigh produced almost twice as many potatoes as any other county, while Lackawanna and Wyoming had the highest yield per acre.

Washington led in wool production with Greene a close second.

Allegheny county has the largest number of farms equipped with radios. —Weekly News Bulletin, Pennsylvania Department of Agriculture.

STERILIZE MILK UTENSILS

Milk utensils should be sterilized. This not only kills bacteria and makes utensils sweet and wholesome but they also dry quickly, which prevents rusting.

LEGAL CRATES NECESSARY IN NEW JERSEY

According to information sent out by the State Department of Weights and Measures in New Jersey, growers are advised that the use of 30-quart crates as containers for farm products is not legal.

The warning is issued as the result of practices of farmers in certain localities in sending their products to market in the so-called "short bushel" packages. This department points out that farmers of the state are in supposing that it is lawful to ship in any size package provided the weight is on it. Legal containers are those holding one pint, 1, 2, 8, 16, 20, or 32 quarts.

The use of 20-quart containers for tomatoes is recommended by the New Jersey Department of Agriculture. Smaller crates are being used by the leading tomato shippers. This follows a practice of Florida, Georgia, South Carolina and other large tomato producing states who pack them in carriers holding a total of 24 quarts. Other northern and southern states that are large tomato shippers use 12-quart crates to a great extent.

Jersey tomatoes are shipped ripe and fully colored and for this reason are easily bruised. Lighter packages, it is pointed out, will lessen the weight and pressure upon the tomatoes in the bottom of the package and so will help to prevent shipping injury. The saving afforded by the use of smaller containers is an added reason for their use.

Milk makes the chicks grow, but also give them clean grass, clover or alfalfa range, for leafy green food is an important source of vitamins.



MISUSE OF CATTLE TAGS

A SERIOUS OFFENSE

Beattie Coldsmith, a farmer and cattle dealer, plead guilty to charges of obtaining money by false pretense. The charge grew out of the misuse of two official ear tags of the kind used by the Bureau of Animal Industry, Pennsylvania Department of Agriculture, to mark cattle that have passed an official tuberculin test. Coldsmith held a cattle sale on February 3, at which he represented that all cattle had been tuberculin tested and officially tagged. The Bureau of Animal Industry learned that Coldsmith had obtained surreptitiously two identification tags and placed them in the ears of two untested cows and sold them to unsuspecting purchasers who believed the cows were tested.

The Bureau then brought the charge of defrauding the buyers, to which Coldsmith plead guilty. When passing sentence on the defendant Judge Davison pointed out that while it may seem a slight offense to misuse a tag, the offense had grave possibilities and that the extreme penalty for the offense may be \$500 fine and three years' imprisonment.

Tuberculin Tested Milch Cows

Subject to 60 day retest

Registered and High Grade
Immediate Delivery

Anderson's Sale & Exchange Stable
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High Grade Dairy Cows

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We handle all kinds of cattle

HOLSTEINS — GUERNSEYS — JERSEYS
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All cows tuberculin tested and sold subject to a 60 or 90 day retest and fully guaranteed in every respect.
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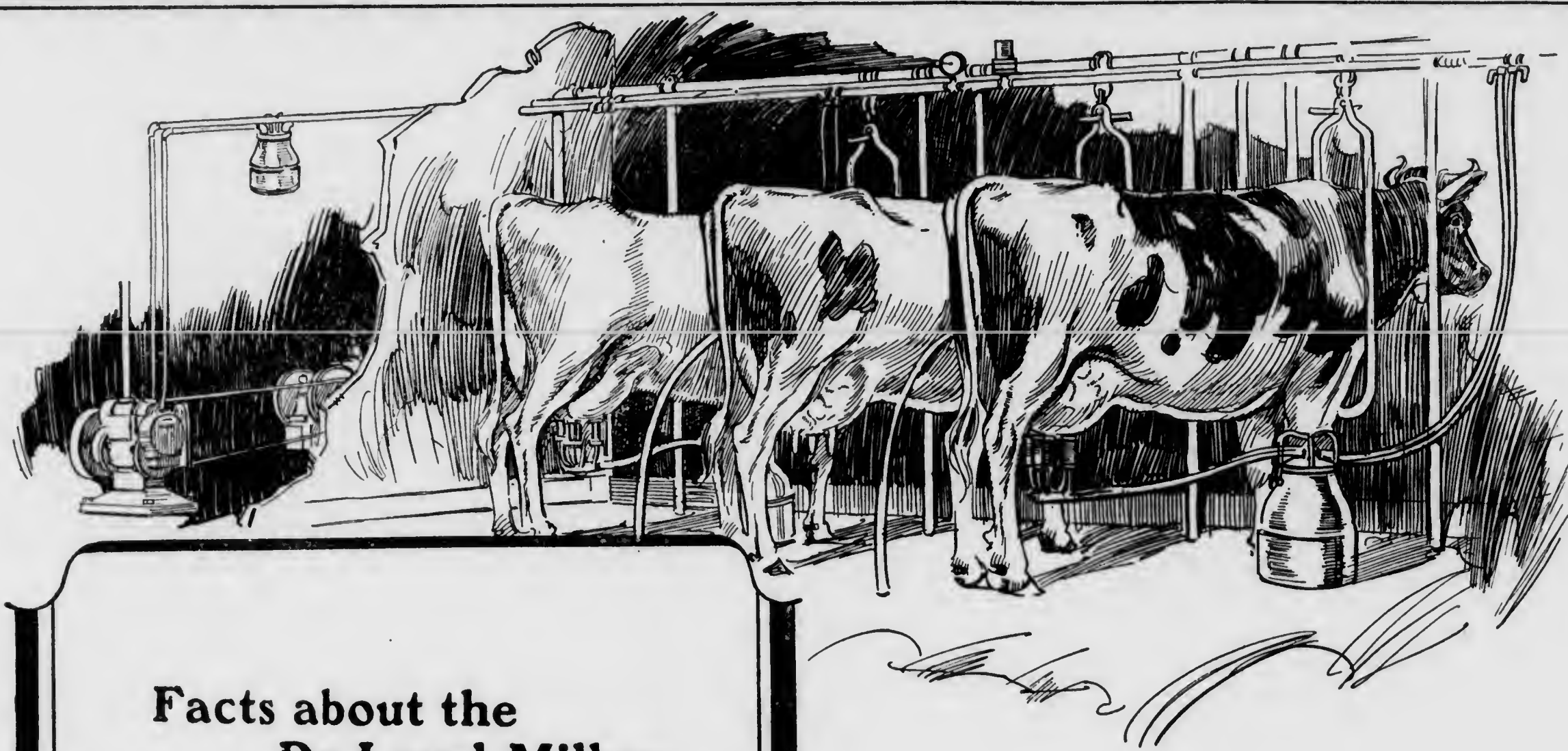
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1. 650,000 cows now milked the De Laval Way.
2. De Laval Milkers now in their eleventh year of use.
3. 83.27% of the users report average saving of 2 hrs., 12 mins. per day.*
4. 97.13% of the users say it agrees with their cows.*
5. 99.4% of the users say they get as much or more milk as by hand milking.*
6. 9.49% average increase in production per cow reported by those who have records.*
7. 94.80% of users say their De Laval is easy to keep in a clean and sanitary condition.*
8. Average bacteria count of all reporting, 14,542—62% report counts of 10,000 and less.*
9. 96.45% of De Laval users say their milker is "the best," "one of the best," or a "good" investment.*

*Based on reports from 1844 De Laval Milker users in all parts of the U. S. and Canada.

TIME SAVED is MONEY EARNED

HAND milking is at best a slow, costly and tedious operation, exacting in its demands on your time. Time that might be profitably spent by yourself or the hired man in doing other work is consumed on the milk stool under a cow. Result? Either the other work must suffer or extra hours must be spent in finishing it. YOUR time is worth money and you are paying your hired man well for his time.

Of more than 1800 users who answered a recent questionnaire, 83.27 per cent state that the De Laval Milker saves them an average of over two hours per day—saves half the time in milking. Two hours per day, figured over the period of a year, represents a tremendous saving when translated into terms of either cash, labor or time. Keep in mind also that saving in time is only part of the advantage of a De Laval Milker—it milks better and produces more and cleaner milk.

De Laval Milkers

See your De Laval Agent or write nearest office below for full information.

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SAN FRANCISCO
61 Beale Street

Milk Producers' Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

VOLUME VIII

WEST CHESTER, PA., AND PHILADELPHIA, PA., JULY, 1927

NUMBER 3

INTER-STATE DIRECTORS HOLD MEETING IN THE FIELD INSPECT DAIRYING CONDITIONS IN 12 COUNTIES MEETING HELD IN BEDFORD, PA.

COW TESTING ASSOCIATION RECORD ON HERD OF I. V. OTTO

Herd Average	Name	Years	Lbs. Milk	Lbs. Fat
		7	12796	421.
Dam	Ethel	7	11024	418.
and two	Virginia	7	14744	490.
Daughters	Patty	5	11912	455.
Dam	Ormsby	7	15226	483.5
Daughter	Star	3	13326	457.
Grand Daughter	Crescent	2	14198	417.
Full	Lucretia	5	13855	464.
Sisters	Mollie	2	13922	492.
Sisters	Margaret	5	13187	451.
	Becky	6	12908	430.

Becky is the one that was shown last year (also three years before) at the Farm Products Show at Harrisburg. She also was the Holstein demonstration cow on the B. & O. Dairy special train last Fall. Also first in a class of forty-two aged cows at the Cumberland County Dairy Show last August and Grand Champion of the Show.

THE INTER-STATE BASIC AND SURPLUS PLAN FOR 1928

The following is as an application of our method of determining producers' basic and surplus quantities to apply for the remainder of 1927 and for the year 1928:

- 1—That the present basic quantity of all farmers shipping to cooperating dealers shall be used in making payments for the remainder of 1927.
- 2—That to determine basic quantities to be used for payment of milk purchased during 1928, the following method shall apply, except in cases where special arrangements have already been made by individual buyers. Determine the average quantity shipped by each producer during October, November and December, 1927, and add to this average the present basic quantity of each producer, dividing by two the sum obtained.
- 3—Every producer whose herd is tested for tuberculosis after January 1, 1927, shall be paid in accordance with his present basic quantity for the balance of 1927 and during the year 1928, except when the producer prefers to have his basic quantity determined in accordance with Section 2.
- 4—Any new shipper starting after October 1, 1927, is to be paid on a basis of 70% basic and 30% surplus of each month's shipment during the balance of 1927. During 1928 he shall be allowed a basic quantity determined by taking 70% of the average amount shipped during October, November and December, 1927.
- 5—Any new producer starting after January 1, 1928, shall establish a basic quantity for that year according to agreement.

The above plan was adopted at a conference of the Executive Committee of the Inter-State Milk Producers' Association and the Buyers of Milk in the Philadelphia Milk Shed, at a meeting held in the offices of the Association, June 22nd, 1927.

the group was addressed by county agent Knode; Mr. Garlan, cashier of the Leymaster, Pa., Peoples National Bank and by Mr. Eppenger, secretary of the Chambersburg Chamber of Commerce.

After leaving Mr. Lehman's farm the trip proceeded over the Allegheny Mountains along the Lincoln Highway, passing through the counties of Franklin, Fulton and Bedford to Bedford, Pa., where following supper, the meeting of the Directors of the Association was held.

At this point the visitors had been able to pass through and inspect conditions in Lancaster, York, Cumberland, Franklin, Fulton and Bedford counties and had traveled an average distance of approximately 200 miles for the days run.

Meeting of the Board

The meeting of the Board of Directors of the Inter-State Milk Producers Association was held at the Fort Bedford Inn, Bedford, Pa., on Wednesday, June 15th. The directors were welcomed in a brief address by Hon. J. Anson Wright, of Bedford, Pa., a member of the Pennsylvania Legislature. A formal response was made by C. F. Preston, a member of the Board.

A roll call showed all the officers and directors present, except A. Raymond Marvel, of Talbot Co., on the eastern shore of Maryland.

The minutes of the preceding Directors meeting, those of the executive Committee, reports of the treasurer and expenditures made since the last meeting of the Board were approved.

After a general discussion it was decided to hold the August meeting of the Board of Directors on the eastern shore of Maryland and a committee composed of directors Donovan, Keith and Twining and C. I. Cohee and Clayton Reynolds, was appointed to make the necessary arrangements, due notice of which will be presented to the members of the Board. The date of the meeting will be August 25th and 26th.

President Allebach then outlined the general market conditions in the Philadelphia Milk Shed, following which there was a general discussion of a draft of plans presented by the Executive Committee for a general basic and surplus plan for 1928. This formal plan, which was approved will be presented to the buyers of milk at a meeting to be held on June 22nd, in the offices of the association in Philadelphia.

Following a brief report on market conditions throughout the territory, the meeting adjourned.

Thursday's Trip

Following breakfast at the Fort Bedford Inn the group left Bedford at 8:00 o'clock standard time. A short visit was paid to the Receiving Station of the Supplee-Willis-Jones Milk Company. The second day's trip led through the valleys of Bedford and Blair counties, stopping at the Meadowbrook Farm, of director S. U. Troutman, passing the recently burned milk plant of the

(Continued on page 3)

ORGANIZATION ESSENTIAL*

The real purpose of a co-operative organization is to determine what the market demands and how much it can use at a fair price, to provide methods of handling surplus, to grade and advertise its wares, and to get producers to act and work together.

Mr. H. D. Allebach, President of the Inter-State Milk Producers' Association, Philadelphia, enumerated before a meeting of the Pure Milk Association of Chicago a few things which his association has done and its accomplishments have been most satisfactory. He, in part, said:

"Our greatest accomplishment was to reduce the surplus milk on the Philadelphia market from 35 to 10% and so adjust production to meet demands. Back in 1919 we learned that we had to produce more milk in winter and less in summer if we expect to get a fair year around price. We decided to penalize the fellow who didn't maintain a level production throughout the year. We went out and held ninety meetings in thirty days among the dairymen to explain why they must equalize production."

It should be noted here that they went out in the territory supplying milk to Philadelphia and held ninety meetings. They didn't simply hold conferences in Philadelphia appoint committees, and then adjourn.

Mr. Allebach also said, "We joined the National Dairy Council, started a two-cent per hundred pound checkoff paid jointly by the producers and dealers and raised \$100,000 to advertise milk and other dairy products in Philadelphia. The association sought to gain the confidence of the dealers. It succeeded. At the same time it realized that if the price of milk is set too high, milk from remote territory will flow in and the market will be demoralized. We also established a Quality Control Department, wrote its own rules and regulations, and hired thirteen men to go out and enforce them. All this required money, but it paid."

The Interstate Milk Producers' Association of Philadelphia is successful and renders its members a splendid service. It has taught the producers market requirements and what must be done to meet them. Producers with such understanding will not continue to produce more than the market will consume at a fair price, or will they turn over their products for the speculator to play with. Through organization they have become masters of their own business and by following sound business practices have raised the price of their product.

*Reprinted from the Editorial page of Hoards' Dairyman, June 10, 1927.

LANCASTER'S MILK FROM T.B. TESTED COWS ONLY

The city of Lancaster, Pa., has won its fight for a milk supply from tuberculin tested cows. The Supreme court recently handed down a decision holding legal an ordinance which requires the milk used within the city limits to come from cows free of tuberculosis.

In a letter to the Pennsylvania Department of Agriculture, Dr. H. B. Mitchell of the Lancaster Bureau of Health, writes, "A survey of the immediate territory indicates that plenty of milk from tuberculin tested herds will be available for Lancaster's needs and plans are being made for the immediate enforcement of the ordinance."

The main object of cultivation is to control weeds.

DRY ICE

Carbon dioxide, the waste product of heating and steam power plants and of various fermentative processes, has recently attained new importance in the refrigeration field. Its use in solid form under the name of "dry ice" is not to be confused with the well-established process of using the gas as the working fluid in the usual type of compression refrigerating system. All machinery at the point of consumption is eliminated and solid blocks of the dry ice are used in much the same manner as ordinary ice.

Certain important differences, however, between the "dry ice" and ordinary ice make it peculiarly adaptable to special conditions. Instead of melting to a liquid it evaporates directly to a gas, so that it is always dry and clean. Its "melting" or rather evaporating temperature is 146°F. lower than that of ordinary ice, so that products which require to be frozen can be kept so without addition of salt. One pound of "dry ice" has twice the refrigerating capacity of a pound of ordinary ice. Finally, the gas has a slight germicidal property which might be useful in certain cases.

Food Transportation

The most obvious use for this material would appear to be in connection with the transportation of perishable food products which must be kept frozen. The present cost of "dry ice," 5 cents per pound wholesale, is only about three times the cost of an ice and salt mixture, counting the additional handling cost of the latter, while the low temperature, cleanliness and increased capacity available in a car will in many cases so far offset this as to show a handsome profit.

A second use is in shipping small quantities of such products as fish and ice cream to distant points. This field is being actively developed to the great advantage of retailers of these products. The development of "dry ice" will be of great value to science and medicine by furnishing a convenient source of refrigeration far colder than ice, and far cheaper than liquid air, which is at present indispensable in many lines of research. It is also possible that a number of important chemical processes, which have hitherto been restricted to laboratory operation by the high cost of producing and maintaining very low temperatures, will be made commercially practicable on a large scale.

Dry ice cannot be expected to replace the older methods of refrigeration to any appreciable extent, but as a supplement to them, it promises to find an important field of its own in which to extend the usefulness of refrigeration. —(Industrial Bulletin, June, 1927).

CLUB MEMBERS GET 56 PUREBRED PETS

Fifty-six Holstein calves have been allotted to as many Union County, Pa., 4-H club boys and girls in the largest distribution of calves ever made in Pennsylvania, reports County Agent L. E. Crauner. Fifty of the calves came from Livingston County, Michigan, which is the second largest center of purebred Holsteins in America.

In the distribution eight bred heifers also went to adult farmers of the county. The club calves were valued at \$8500. Union county banks cooperated with the Agricultural Extension Association in sponsoring the movement.

AMERICAN JERSEY CATTLE CLUB MEETS

The 59th Annual Meeting of the American Jersey Cattle Club held in New York on June 1st disclosed the fact that the healthy growth of the Jersey breed continues without interruption. Mr. Lewis W. Morley in his first report as Secretary of the Club announced that during the past fiscal year the number of registrations of purebred Jersey cattle reached a total of 55,904, a new high record for all time. Since 1904 registrations have shown an average annual increase of 9.7 percent, while the number of transfers has increased at an average rate of 9.3 percent.

Testing for production had increased during the past year, and extension work has made good progress. One of the features of this work has been the assistance given in the development of community programs for the advancement of better dairying. Better sires, bull circles or associations, calf clubs and testing work have been stressed in the Club's educational work.

President Barnes at this meeting outlined his plan to bring about more uniform judging in the show ring. He and Prof. H. H. Kildee of Ames, Iowa, and Mr. C. J. Tucker of Longview Farm, Lee's Summit, Missouri, have been working on this matter for many months, and it is believed that the judges at the larger shows will cooperate in the effort to secure greater uniformity, with more emphasis laid on capacity and milking qualities as shown by veining, form and size. The minimum and maximum weights for mature cows and bulls have been increased 100 pounds on the score card, but it is felt that this step to improve capacity, milkiness and size will not conflict with the smoothness, beauty and quality of the Jersey breed.

A resolution tendering the profound sympathy of the Jersey breeders to those who suffered from the flood in the Mississippi Valley was passed at this meeting. As a direct aid in the speedy rehabilitation of the devastated area an appeal will be made to Jersey breeders throughout the country to contribute Jersey cows and heifers to be shipped to the tick-free areas for distribution by the Rehabilitation Committee.

Col. A. Victor Barnes of New Canaan, Connecticut, was unanimously re-elected president. A. L. Churchill of Vinita, Oklahoma, was elected vice-president by the board. The new directors are: J. S. Campbell, Butler, Pennsylvania; Sam F. Crabbe, Fargo, North Dakota; John S. Ellsworth, Simsbury, Connecticut; J. W. Coppini, Ferndale, California; and J. Riley Green, Wolfe City, Texas.

CORN BORER PARASITES

Parasites of the corn borer have been imported in large quantities this spring; 160,970 cocoons of one variety and 33,881 of another are reported by the Bureau of Entomology, and five additional species of parasites will be reared at Arlington, Va. (near Washington, D. C.), from the 1,661,590 corn borer larvae which have been imported. Parasite liberations have already started in New England, Ohio, and Michigan. Imported parasites of four species are reported as recovered this spring as a result of winter collections.

Uncle Ab says most of the big things men do are nothing more than the results of the little things they do every day.

ROADS TO BE PATROLLED TO STOP BEETLE SPREAD

Starting June 15 and continuing until October 15, all important roads leading out of the Japanese beetle quarantine area in southeastern Pennsylvania will be patrolled and inspections made of vehicles to check the spread of the beetles in farm products and cut flowers, according to plans made public by the State Department of Agriculture.

The road inspectors will be on the job 24 hours a day and will be kept busy seven days a week. They will be given orders to intercept any vehicle passing out of the quarantine area that is carrying any product, enumerated in the regulations, which has not been certified as free of beetles.

The State and Federal governments, as in the past, will prosecute persons who violate the quarantine. Last year, one party was fined \$100 for grossly disregarding the regulations. However, the public, realizing the danger of spreading the beetles, has been very willing to cooperate and in only a few cases has it been necessary to resort to legal measures.

In addition to the road patrols, offices for district supervisors have been established at Lancaster, Lebanon, Harrisburg, Allentown, Hamburg, Oxford (Chester County), and Norristown. These supervisors will certify products for transportation from the beetle area.

J. K. Gould, who has been associated with the Japanese beetle work in Pennsylvania and New Jersey for the past five years, is in charge of the quarantine enforcement work in this State. He is stationed at Norristown, Pa.

The area quarantined in Pennsylvania because of the Japanese beetle includes the following: Counties of Philadelphia, Bucks, Berks, Montgomery, Northampton, Lehigh, Chester, Delaware, Lancaster, and Lebanon; and the townships of Conewago, Londonderry, Derry, South Hanover, West Hanover, East Hanover, Swatara, Lower Swatara, Lower Paxton, and Susquehanna, and the City of Harrisburg, in Dauphin County.

THE LABOR SITUATION AS VIEWED BY THE NEW YORK FEDERAL RESERVE BOARD

Reports of recent years have had it that there had been occurring a definite drift in population from farm toward the city. In view of these reports, it is interesting to note that, according to the New York Federal Reserve Board, factory employment has been declining while the supply of workers available for farm hire have increased.

These opposing tendencies now show a range practically equal to the conditions of five years ago. In other words factory labor has declined from about 105 per cent, in 1923 to 93 per cent, during the present year, while farm labor, which stood at approximately 90 per cent, five years ago has now increased to nearly 103 per cent.

This increase in the supply of farm labor, the New York Federal Reserve Board suggests has occurred without the inducement of high wages, for farm wages have been increasing at a slower rate than factory wages.

FRANKLIN COUNTY BIRDS LAY WAY TO GOOD MARK

Laying 88 eggs in six months, 750 White Leghorns in the flock of J. L. Gayman, Chambersburg, Pa., are leading nine flocks in a Franklin county poultry club. The flocks average 400 birds each and 67 eggs per bird for the six months.

INTER-STATE DIRECTORS HOLD MEETING IN THE FIELD
Inspect Dairying Conditions in 12 Counties

(Continued from page 1)

Abbott Company at Curryville, in the Morrison's Cove district in Blair Co., Pa.; H. B. Stewart, Alexandria, Huntingdon Co., Pa.; S. U. Troutman, Bedford, Bedford Co., Pa.; A. B. Waddington, Woodstown, Salem County, N. J., and A. A. Miller, Editor, Milk Producers' Review, Philadelphia, Pa.

The following members of the Milk Producers' Association field men, and members of the Quality Control Department of the Dairy Council, and county agents also participated in the trip. Many of these representatives serve as guides and "bureaus of information for the various groups of directors: E. P. Bechtel, Royersford, Pa.; C. E. Cowan, New Holland, Pa.; E. C. Dunning, Chambersburg, Pa.; O. S. Havens, Williamsburg, Pa.; H. D. Kinsey, Quaker-

Following the dinner, which marked the breaking up of the group movement, addresses were made by R. W. Balderston, directors J. A. Poorbaugh; C. F. Preston and President H. D. Allebach, each of whom referred to the exceptional value of the trip, not only from the viewpoint of education but from the closer personal contact of the directors in general.

Leaving Lewisburg, the Philadelphia group proceeded via Harrisburg and Lancaster, having covered a distance of 296 miles for the day and crossing through the Milford, Juniata, Perry, Dauphin, Lancaster, Chester and Delaware counties in Pennsylvania.

The aggregate mileage, out of Philadelphia, for the two days was about 536 miles.

Among those who participated in the trip were: H. D. Allebach, President, Trappe, Mont. Co., Pa.; Fred Shangle, Vice President, Trenton, Mercer Co., N. J.; R. W. Balderston, Secretary, Media, Del. Co., Pa.; Robert F. Brinton, Treasurer, West Chester, Chester County, Pa.; Directors, I. J. Book, Strasburg, Lanc. Co., Pa.; E. H. Donovan, Brenford, Del.; F. M. Twining, Newtown, Bucks Co., Pa.; J. H. Bennett, Sheridan, Lebanon Co., Pa.; E. Nelson James, Rising Sun, Cecil County, Md.; H. I. Lauver, Port Royal, Juniata Co., Pa.; S. Blaine Lehman, Chambersburg, Franklin Co., Pa.; J. A. Poorbaugh, York, York Co., Pa.; I. V. Otto, Carlisle, Cumberland Co., Pa.; F. P. Willits, Ex-Sec. of Agr. for Penna., Ward, Delaware County, Pa.; E. R. Pennington, Kennedysville, Md.; C. F. Preston, Nottingham, Chester Co., Pa.; Albert Sarig, Bowers, Berks Co., Pa.; C. C. Tallman, Columbus, N.

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NEW JERSEY DEPARTMENTS PREPARE VOCATIONAL SCHOOL STUDENTS FOR MILK TESTING

New Jersey boys are doing their share in keeping the state to the fore in agriculture.

During the past ten days pupils in 18 vocational high schools received instruction in judging milk, the immediate purpose of which is to fit them to take part in a contest at the Inter-State Fair at Trenton, next fall. The high men in this judging will be given a chance to compete in a similar contest at the National Dairy Show, to be held in Memphis, Tennessee, during October.

The Department of Agriculture, the Department of Public Instruction and the Inter-State Dairy Council united in successfully carrying out the project. Approval of the work was given by

DAIRY BULL ASSOCIATIONS NUMBER 248 IN 33 STATES

Few dairymen are so situated financially that they can afford to purchase a really first-class purebred bull for a medium-sized or small herd of dairy cows, says J. C. McDowell, dairy husbandman of the United States Department of Agriculture. But every dairymen, regardless of the size of his herd or the condition of his pocketbook, can well afford to own a share in a high class bull. In fact, the dairymen with only a few cows from which to obtain an income is the very one who needs a high producing dairy herd. He is the man who can least afford the great losses that come from carelessness in breeding.

For dairymen in these circumstances the cooperative bull association offers a means of securing the use of better dairy bulls than could otherwise be had. Through the system of transferring bulls

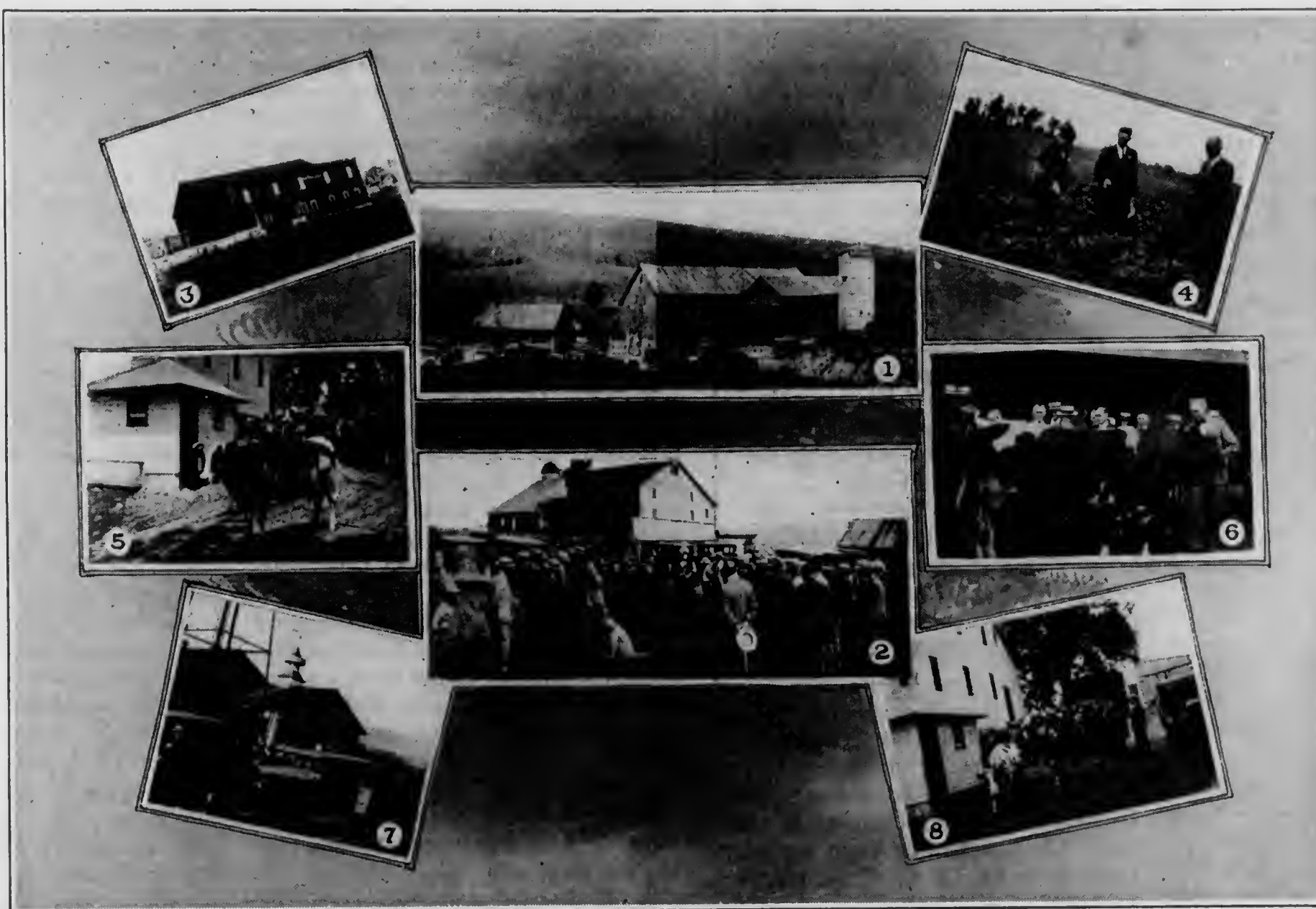
from farm to farm, as is done in a bull association, it is possible to keep all bulls until their daughters have made records and until the records of the dams and daughters have been compared. That makes it possible to determine which are the good bulls and which ones should be retired from service.

When the census was taken in 1920 only 25 per cent of the dairy bulls of the United States and only 3 per cent of all the dairy cattle were purebred, and there was only one purebred bull to each 23 farms. That is not a good record for an important dairy country. To improve this condition the first step should be to eliminate all bulls except the purebreds; the next, to prove all the purebred bulls through the records of their daughters and to eliminate all whose daughters are unsatisfactory.

The growth of a movement does not always prove its value; but in the case of dairy-bull associations the continued and almost constant growth since the work began is at least some indication of what the dairymen think of this method of cooperative breeding. In 1910, two years after the work began, there were 9 associations; in 1915 there were 15 associations; in 1920 there were 123 in 30 States; and in 1927 there are 248 associations in 33 States.

FARM LABOR CONDITIONS IN NEW JERSEY IMPROVED

The supply of farm labor in New Jersey on June 1st was estimated at 94 per cent of a normal, and the demand at 94 per cent of a normal, resulting in a potential supply of 100 per cent, as compared with 98.9 per cent, the May 1st potential and 91.2 per cent, the potential supply on June 1, 1926.



SCENES ON TRIP OF I. M. P. A. DIRECTORS TO WESTERN ASSOCIATION TERRITORY

1. Dairy Barn of R. I. Tussey at Boiling Springs, Pa.
2. Group at S. Blaine Lehman's hearing address by representative of the local Chamber of Commerce.
3. The dairy barn of S. U. Troutman.
4. Former Secretary of Agriculture Frank P. Willits, Ralph
- 5 & 8. Inspecting some high producing cows of I. V. Otto.
6. Young herd bull of J. A. Poorbaugh.
7. Supplee-Wills-Jones Milk Co. receiving station at Bedford, Pa.

INTER-STATE MILK PRODUCERS REVIEW

Official Organ of the
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August A. Miller, Editor
Frederick Shangle, Advertising Manager
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S. Blaine Lehman
A. R. Marvel
L. V. Otto

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Editorial



Recent developments relative to the milk supply of New York City raised the question particularly in the west as to the basis on which the dairymen of the east and middle west can cooperate. There is no question but that the fast growing cities of the east will require greater and greater quantities of milk and sweet cream they say to supply them. Can the eastern dairymen supply this growing demand? Would it be profitable for the western dairyman to compete in supplying milk and cream for these markets?

There has been considerable agitation along this line in several western dairy states looking toward the marketing of milk and sweet cream in the large cities of the east, but it is said that the long haul would more than make up any difference in cost of production and the project might not be as profitable as it looks on the surface.

Sanitary regulations such as are enforced in the eastern markets and particularly in our own territory also have a bearing on such importations.

From the standpoint of the Philadelphia Milk Shed any heavy importation of fluid milk hardly seems possible in view of the basic and surplus plan of selling milk. This plan supplies sufficient fluid milk in the short season.

From the standpoint of cream however there always has been a considerable supply of cream being imported into this district from the west and will probably continue as long as the heavy summer demand for cream for ice cream manufacture continues.

The Milk Producers' Review goes to you every month in the year. It gives you information pertaining to the Associations affairs, it gives you correct market information and milk prices, it keeps you advised, both locally and

nationally of interesting affairs pertaining to dairying—and it does still more—it carries a high grade line of advertising in every issue.

These advertisements, through the payment of regular rates for space, pay for a large part of the expenses incurred in printing and publishing the Milk Producers' Review. These advertisers are entitled to your patronage. A postal card will bring you definite information regarding each class of matter advertised, but, be sure of one thing, use the complete mailing address in each advertisement or better still when replying to such advertisements, mention the fact that you read it in the Milk Producers' Review. It pleases the advertiser to learn where you saw his ad, and incidentally shows him that readers appreciated his use of space in the Milk Producers' Review.

Following a meeting of the buyers of milk in the Philadelphia Milk Shed and the Executive Committee of the Inter-State Milk Producers' Association, held on June 22nd, in the offices of the Association, a method of establishing a producers basic quantity for 1928 was adopted.

This basic is printed in detail on page one of this issue of the "Milk Producers' Review."

It should be carefully studied by every shipper of milk. The basis as outlined, is, it is believed, equitable to all producers. Without any hardship the new plan should adjust production so as to conform to the reasonable demands of consumption.

Locals of the Inter-State Milk Producers' Association, desiring meetings for group explanation of the new plan, can make the necessary arrangements by notifying the Philadelphia Office.

R. H. Bell of the Pennsylvania State College has been appointed as Director of the Bureau of Plant Industry, State Department of Agriculture, to take office July 1, according to an announcement made by Dr. C. G. Jordan, Secretary of Agriculture.

Mr. Bell is a native of Huntingdon county, Pennsylvania, was reared on a farm and taught county school for four years. He graduated from Pennsylvania State College in 1910 and did research work in horticulture for three years. He served as county agent in Lycoming county from 1914 to 1919 and has been assistant director of agricultural extension work in this state since 1919.

STATE COLLEGE TRUSTEES

County agricultural and engineering association delegates have reelected John A. McSparran, Furness; C. J. Tyson, Floradale and W. P. Rothrock, State College, as trustees of the Pennsylvania State College. Frank P. Willits, former State Secretary of Agriculture, was also returned to the board by these delegates. Alumni elected J. G. White, New York; W. L. Affelder, Pittsburgh, and Boyd A. Musser, Scranton. All will serve terms of three years.

BORER DOES NOT LIKE ALFALFA

Alfalfa is not one of the 208 host plants included in the menu of the European corn borer. Many farmers who have been planning to plant alfalfa for years have a good reason now for delaying no longer.

MARKET CONDITIONS

In the Philadelphia Milk Shed During June

The lack of seasonable warm weather has sharply curtailed the consumption of fluid milk during the past month. At the same time conditions have greatly favored production, in that pasture grass has had the best stand in years.

These conditions have resulted in a temporary over supply in production. In many cases distributors have been unable to move the supply of basic milk through the usual consumptive channels.

Under these circumstances the buyers of milk have asked for and the executive committee of the Inter-State Milk Producers' Association has agreed to waive the customary increase of ten per cent in the established basic quantity, under which they would pay for 110 per cent of the established basic quantity, at full basic prices, for the month of July.

The buyers original demand was for the elimination of this additional percentage during the next three months. The executive committee could not agree to this, in that it felt that with seasonable summer conditions consumption would return to normal and that any set back in the present favorable pasture growing conditions, might result in a decreased supply.

Under these conditions adjustments can be made, if necessary, during the remainder of the summer months, dependent upon conditions during that respective period.

Following the policy of the association to develop further the basic and surplus features of the Philadelphia Selling Plan, the officers and Board of Directors have been working for some time on that problem. After carefully investigating conditions which have been developing, particularly during the past two years and studying the effect of the various factors of the supply, the Board approved both in principle and in detail the plan which was presented to the distributors. After thorough discussion by both interests and a definite clarification of the details of the program, the representatives of the distributors of the territory who were present agreed to the proposed plan.

A full description of the program for establishing the basic amount of milk for October, November and December, 1927, and for establishing the basic quantity for 1928 is printed on page one, of this issue of the Review. This program was adopted with a view of obtaining a satisfactory supply of milk at all seasons of the year. Over production, at any time has a very unsatisfactory influence on the supply and is an important factor in breaking the market. Supply and demand are the important factors in establishing a price and it is hoped that producers will

adjust their production to meet normal consumptive demand.

June Market Prices

Grade B market milk, three per cent. butterfat content (basic quantity average), delivered f. o. b., Philadelphia, during June, is quoted at \$3.29 per hundred pounds.

The price of basic milk (basic quantity average), three per cent, butterfat content, delivered at Receiving Stations, in the 51-60 mile zone, during June, is quoted at \$2.71 per hundred pounds. The usual butterfat differential and freight rate variations applying at other mileage points in the territory, as shown by quotations on page 5, in this issue of the Review.

The price for Class I surplus milk, for June, three per cent butterfat content, at all Receiving Stations, is \$1.61 per hundred pounds. For f. o. b. Philadelphia delivery, this price is quoted at \$2.19 per hundred pounds or 4.7 cents per quart.

The price of Class II surplus milk, for June, three per cent butterfat content, at all Receiving Stations, was \$1.27 per hundred pounds. The f. o. b., Philadelphia price for the same class of milk is quoted at \$1.85 per hundred pounds, or 3.95 cents per quart.

June Butter Market

The price of butter during June has been almost stationary. There have been no wide fluctuations and the range of price for the month has not exceeded, at any time, more than a fraction of a cent. In fact, for days there was no change in the general market quotations. Government statistics on June first (issued on June 15th) show creamery butter stocks as being 25,340,000 pounds, as compared to 17,852,000 pounds one year ago. Production, however, is expected to gain during June, when the heavy producing season sets in, although unfavorable weather conditions may have some influence on the make.

At the close of the month the market had a somewhat stronger appearance, with a slight upward price tendency. Buyers showed more interest in the market, but were buying cautiously. As a rule stocks in buyers hands are relatively small.

The price of 92 score butter, solid packed, New York City, at the opening of June was 43 cents. During mid-month this price sagged by fractional points and gradually settled to 42 cents. At the close of the month the price range was 42½ cents.

The average price of 92 score butter, New York City, on which June surplus prices were computed, was 4255 cents per pound, as compared to 4381 cents per pound one month ago.

Fly Control

The season of fly control on the dairy farm is at hand. With the coming of the warmer weather flies have increased enormously. In order that dairy cattle production may be maintained and from a general sanitary condition as well, the growth of the fly should be rigidly controlled.

Flies in the dairy barn can be controlled and almost entirely eliminated. In a tightly screened barn the trap method has been quite effectively used. For general effectiveness however some

good spray repellent has proven quite efficient. Cleanliness about the barn and stable must be observed to rid the flies of breeding places. The stables should be kept free from manure.

In spraying for stable and house flies, which in the most cases are found sucking blood from the legs of the cattle the spray shot directly at them usually gives telling results.

When traps are used the bait should be changed every week, black strap molasses or sugar diluted with water is usually used to bait the trap.

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN
The basic price quoted below for June, 1927, is to be paid by cooperating dealers on the average basic quantity established by each producer. For all milk bought in excess of the basic amount, the surplus prices quoted below for the month of June are to be paid.

Beginning with January the basic quantity will be established by using the higher average basic quantity established in October, November and December of either 1925 or 1926. These quotations are based on 3% butterfat milk and a differential of 4 cents for each tenth point and 2 cents for each half tenth point up or down and are for all railroad points. (Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES
This price list is issued with the understanding it is net to the producers and that all buyers using it as a basis of payment to producers, shall in addition thereto make the following contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46% quarts) of all milk purchased from any producer at price listed herein.

(2) To the Inter-State Milk Producers' Association 2c per 100 pounds (46% quarts) of all milk bought from members of said Association.

(3) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46% quarts) of all milk bought from other producers at price listed herein.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets, and for an educational campaign advertising the food value of dairy products.

BASIC PRICE		BASIC PRICE	
June		June	
F. O. B. Philadelphia		Country Receiving Stations	
GRADE B MARKET MILK		GRADE B MARKET MILK	
Test	Per	Test	Per
per cent.	100 lbs.	per cent.	100 lbs.
3.0	\$3.29	3.0	\$1.61
3.05	3.31	3.05	1.63
3.1	3.33	3.1	1.65
3.15	3.35	3.15	1.67
3.2	3.37	3.2	1.69
3.25	3.39	3.25	1.71
3.3	3.41	3.3	1.73
3.35	3.43	3.35	1.75
3.4	3.45	3.4	1.77
3.45	3.47	3.45	1.79
3.5	3.49	3.5	1.81
3.55	3.51	3.55	1.83
3.6	3.53	3.6	1.85
3.65	3.55	3.65	1.87
3.7	3.57	3.7	1.89
3.75	3.59	3.75	1.91
3.8	3.61	3.8	1.93
3.85	3.63	3.85	1.95
3.9	3.65	3.9	1.97
3.95	3.67	3.95	1.99
4.0	3.69	4.0	2.01
4.05	3.71	4.05	2.03
4.1	3.73	4.1	2.05
4.15	3.75	4.15	2.07
4.2	3.77	4.2	2.09
4.25	3.79	4.25	2.11
4.3	3.81	4.3	2.13
4.35	3.83	4.35	2.15
4.4	3.85	4.4	2.17
4.45	3.87	4.45	2.19
4.5	3.89	4.5	2.21
4.55	3.91	4.55	2.23
4.6	3.93	4.6	2.25
4.65	3.95	4.65	2.27
4.7	3.97	4.7	2.29
4.75	3.99	4.75	2.31
4.8	4.01	4.8	2.33
4.85	4.03	4.85	2.35
4.9	4.05	4.9	2.37
4.95	4.07	4.95	2.39
5.0	4.09	5.0	2.41

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

JUNE SURPLUS PRICE		JUNE SURPLUS PRICE	
F. O. B. Philadelphia		F. O. B. Philadelphia	
Test	Per	Test	Per
per cent.	100 lbs.	per cent.	100 lbs.
3.0	\$2.19	3.0	\$1.61
3.05	2.21	3.05	1.63
3.1	2.23	3.1	1.65
3.15	2.25	3.15	1.67
3.2	2.27	3.2	1.69
3.25	2.29	3.25	1.71
3.3	2.31	3.3	1.73
3.35	2.33	3.35	1.75
3.4	2.35	3.4	1.77
3.45	2.37	3.45	1.79
3.5	2.39	3.5	1.81
3.55	2.41	3.55	1.83
3.6	2.43	3.6	1.85
3.65	2.45	3.65	1.87
3.7	2.47	3.7	1.89
3.75	2.49	3.75	1.91
3.8	2.51	3.8	1.93
3.85	2.53	3.85	1.95
3.9	2.55	3.9	1.97
3.95	2.57	3.95	1.99
4.0	2.59	4.0	2.01
4.05	2.61	4.05	2.03
4.1	2.63	4.1	2.05
4.15	2.65	4.15	2.07
4.2	2.67	4.2	2.09
4.25	2.69	4.25	2.11
4.3	2.71	4.3	2.13
4.35	2.73	4.35	2.15
4.4	2.75	4.4	2.17
4.45	2.77	4.45	2.19
4.5	2.79	4.5	2.21
4.55	2.81	4.55	2.23
4.6	2.83	4.6	2.25
4.65	2.85	4.65	2.27
4.7	2.87	4.7	2.29
4.75	2.89	4.75	2.31
4.8	2.91	4.8	2.33
4.85	2.93	4.85	2.35
4.9	2.95	4.9	2.37
4.95	2.97	4.95	2.39
5.0	2.99	5.0	2.41

4.75	2.80	6.2	2.55	5.5	
4.8	2.91	6.25	2.57	5.5	
4.85	2.99	6.3	2.59	5.55	
4.9	2.95	6.35	2.61	5.6	
4.95	2.97	6.4	2.63	5.65	
5.	2.99	6.4	2.65	5.7	
SURPLUS PRICES					F.O.B.
Monthly Surplus Prices					quart Phila.
4¢ at all receiving stations					station 50 mile zone per cwt.
1926	Class I	Class II	January 1-15	1.15	2.60
January	2.15	1.79	January 16-31	6.3	2.87
February	2.13	1.77	February	6.8	2.87
March	2.04	1.69	April	6.3	2.87
April	1.87	1.55	May	5.8	2.18
May	1.92	1.56	June	5.8	2.18
June	1.95	1.62	July	6.3	2.87
July	1.96		August	6.3	2.87
August	1.96		September 1-15	6.3	2.87
September	2.10		September 16-30	7.1	2.74
October	2.21		October	7.1	2.74
November	2.37		November	7.1	2.71
December	2.59		December	7.1	2.71
1927			1927		
January	2.37	1.97	January	7.1	2.71
February	2.43	2.02	February	7.1	2.71
March	2.36	1.96	March	7.1	2.71
April	2.43	2.02	April	7.1	2.71
May	2.07	1.72	May	7.1	2.71
June	2.01	1.67	June	7.1	2.71

Why Certified Dairies Prefer the Universal Milker

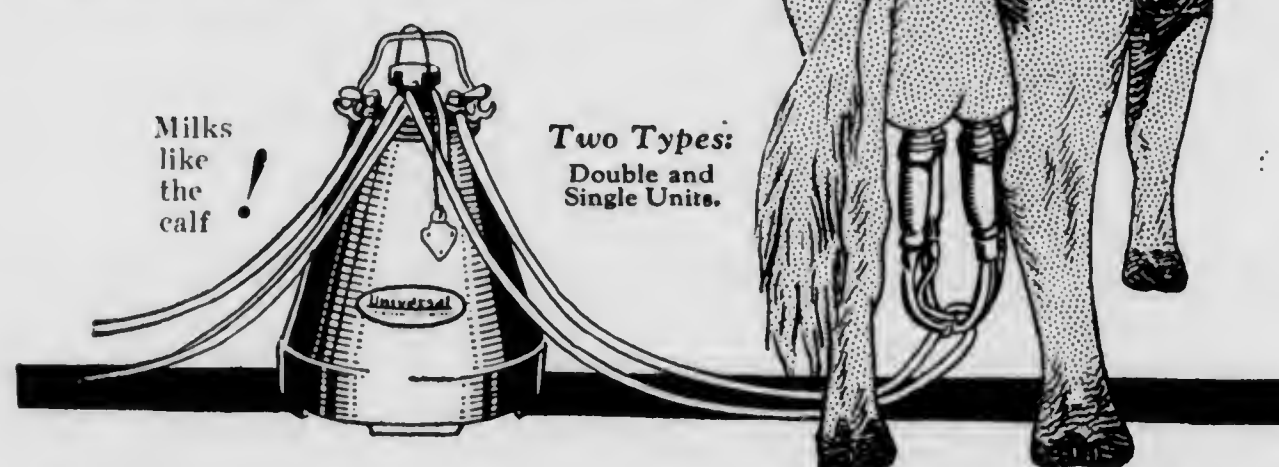
Certified dairies have a greater labor problem than ordinary dairies because of the extra care required in looking after and milking the cows. Certified milk must be clean, and low in bacteria count, above everything else!

In order to make a profit on his investment and labor, the certified dairyman must do two things: (1) Produce absolutely clean milk; (2) Eliminate hand labor wherever possible so as to hold down production costs.

It is because the Universal Milker accomplishes these two things with the utmost efficiency that so many of the leading certified dairies throughout the country milk their herds with the Universal Natural Milker.

You cannot do better than follow the example of leading certified dairies. Write for free catalog describing Universal Milkers in detail.

The
Universal Milking Machine Co.
Dept. 1 M
Waukesha, Wisconsin Syracuse, N. Y.
Universal
natural milker



POWER AND THE PLOW

P & O Tractor plows will begin to save you money the moment the plows enter the soil. It has been demonstrated beyond question that tractor power for plowing is more economical than horse power.

These P & O plows are light draft plows that are built to meet the requirements of dependable and economical plowing.

Drawn by the powerful McCormick-Deering tractors they will do a fine job of plowing under the most severe conditions.



International Harvester Co.
of America, Incorporated

Philadelphia Harrisburg Baltimore

AN ABUSED EXPRESSION*

Economy of production is fundamentally right; it is the thing most of us are striving for, and the man who can produce milk and butter at the least cost is most likely to be successful.

But some of us have an utter misconception of what economical production really means. We have seen men turn their cows out on nothing but stalk fields, and think they were making a profit because the cows were eating only stubble that would otherwise be wasted. Consequently, according to their reasoning, all the milk produced was net profit. The thought that seems to predominate in too many cases is that the less spent on feeds, sires, and improvements, the less there will be to deduct from the net profits at the end of the year.

What if we do have to spend a few hundred dollars for feed during the year? If the cows produce enough more to pay for it and leave a good margin of profit besides, as a result of the extra feed, we are ahead. The same holds true of barn equipment or other improvements. Wouldn't you rather have a cow that produced 400 pounds of butterfat at a feed cost of 25 cents a pound and gave a profit of \$100 over feed cost, than one which only produced 100 pounds of butterfat on cornstalks and wheat straw, and gave only \$50 worth of product altogether? The second cow produced at less feed cost per pounds, but where are the profits? The balance on hand after all bills are paid is what it takes to install the new water system for the wife, or to buy the new automobile.

I like the philosophy of my old friend, who remarked that he had quit worrying so much about the feed bills and other costs. He said he did watch the producing and mighty closely, and as long as production income was keeping far enough ahead of expenses, he thought he would get along. His philosophy would be a profitable thing for a lot more of us.

*The Dairy Farmer, for April 1927.

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Gets ALL the Dirt
More MONEY for YOUR MILK
Write today for descriptive literature and particulars of how Dr. Clark's PURITY Milk Strainers help you get Grade "A" test and more money for your milk.
It is the only Strainer made that's guaranteed to strain 100% clean. Our 10 Day Trial Test enables you to prove it at our risk—your money back if it fails to remove ALL the dirt. Thousands in use—two sizes 10 qt. and 15 qt. Sold by dealers everywhere. (C)
PURITY STAMPING COMPANY
Dept. F5 Battle Creek, Michigan
DR. CLARK'S PURITY MILK STRAINER

How to Keep Milk Sweet

Bad utensils make bad bacteria
Bad bacteria make bad milk
Bad milk makes bad customers
Bad customers make bad business
Good B-K makes good utensils
Good utensils make good milk
Good milk makes good customers
Good customers make good business
easy the B-K way

WHAT makes milk sour? Authorities are agreed the most common cause is seeding of the milk with bacteria from contact with non-sterile utensils, etc. Furthermore, cans sterilized at the factory become seeded again through exposure, so that by the time the farmer is ready to use them, they are infected. The only safe plan is to sterilize all cans and utensils just before using, at the farm, with a B-K rinse. Tests prove it kills 95% of the bacteria. You will find it pays to use B-K. It costs only a couple of cents a day to keep utensils and milking house sweet and clean. You'll prevent sour, off-flavored milk and more.

Write Today for FREE Bulletin
telling all about B-K way for quick, easy sterilizing of cans, buckets, separators, milking machines, etc.
General Laboratories Dept. 108C Madison, Wis.

Willard

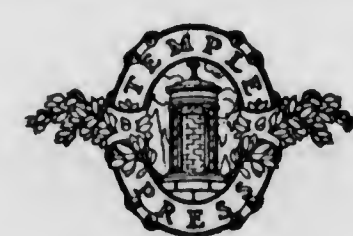
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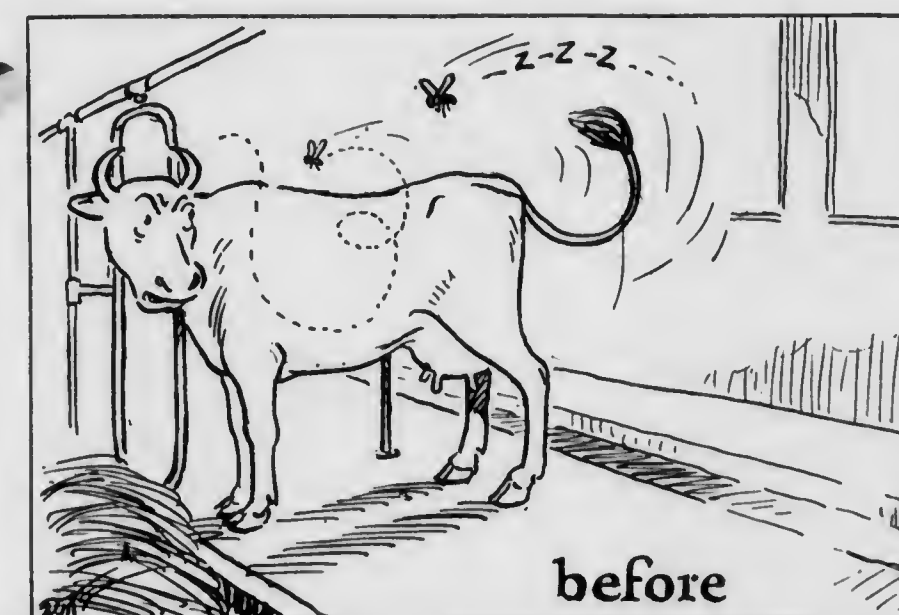
Bell Phone No. 1 West Chester, Pa.

Poultry Wire—Special Cash Sale
2-in. Mesh—1 ft. roll, \$1.10; 1½ ft., \$1.75; 2 ft., \$1.95; 3 ft., \$2.75; 4 ft., \$3.65; 5 ft., \$4.50; 6 ft., \$5.20.
1 in. Mesh—1 ft. roll, \$2.65; 1½ ft., \$3.90; 2 ft., \$4.90; 3 ft., \$6.65; 4 ft., \$8.95; 5 ft., \$10.95; 6 ft., \$12.95.
Galvanized after weaving, 150 ft. rolls.
Satterthwaite's Seed Store
16 N. Warren St., Trenton, N. J., Phone 8278

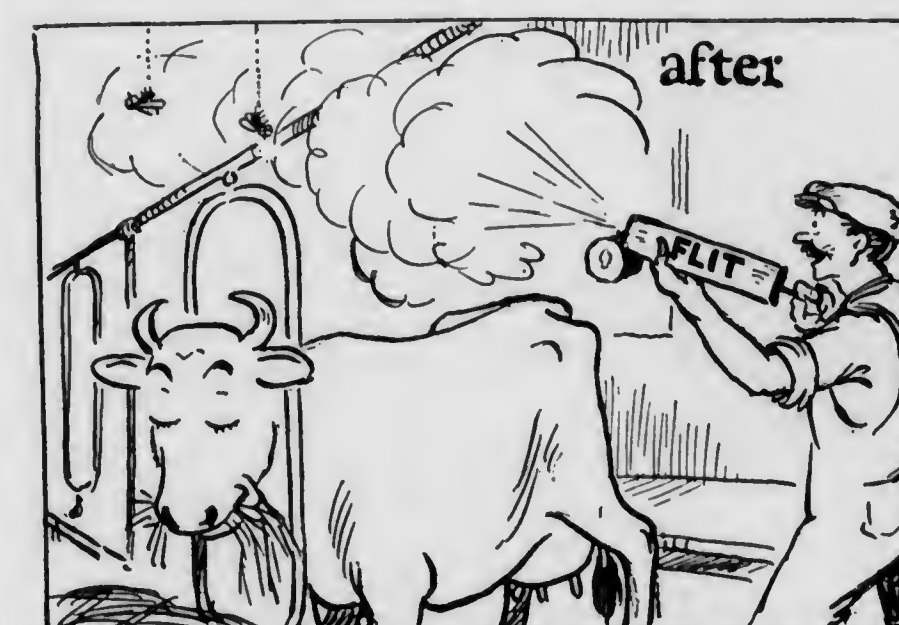
Dairies who use Flit are enthusiastic about it

Here's what they say:

"Enclosed is order for five gallons of Flit. We have been using it for several years and find it most satisfactory and effective to rid our plant of flies and bugs. We spray our plant every day when we are through with the work." J. J. Schneider, President, Ashland Sanitary Milk Co., Ashland, Ky.



"I have been in the dairy business for a good many years and have used a good many different kinds of insecticides in an effort to maintain a strictly sanitary dairy. Flit is the most effective insecticide I have ever used and I highly recommend it. Now buying it in large containers." W. I. Evans, Manager, East Side Dairy, Muskogee, Okla.



"After having used your insecticide, Flit, in our dairy barn for the past eight months it gives us pleasure to indorse and recommend this preparation to any concern who might be in need of an insecticide that will produce the results that the buying public has a right to expect." R. H. Cooke, State Normal College, Natchitoches, La.

If Flies Bother Your Cows—

here's our suggestion:

Play fair with your cows. Follow the experience of leading dairies. Spray Flit every day to rid your premises of annoying, disease-bearing flies and other insects. If you have never used Flit—send for facts today. Try it out in your own plant.

Contented cows! More milk! Flit is non-poisonous—harmless to man and beast, but fatal to insects.

After sundown spray Flit toward ceiling of barns, where flies usually rest. The "fog" thus formed quickly kills flies. Spray cows themselves when they come in from pasture—keeps away flies during milking. Spray them before going out to pasture. Also spray Flit at night in milk bottling plant, after bottling, which avoids any possibility of imparting a taste or odor to the milk.

Send today for our leaflet "Proper Use of Flit in Dairies" and our special offer to dairies. Be sure to get Flit! Do not accept substitutes.

Introductory Offer

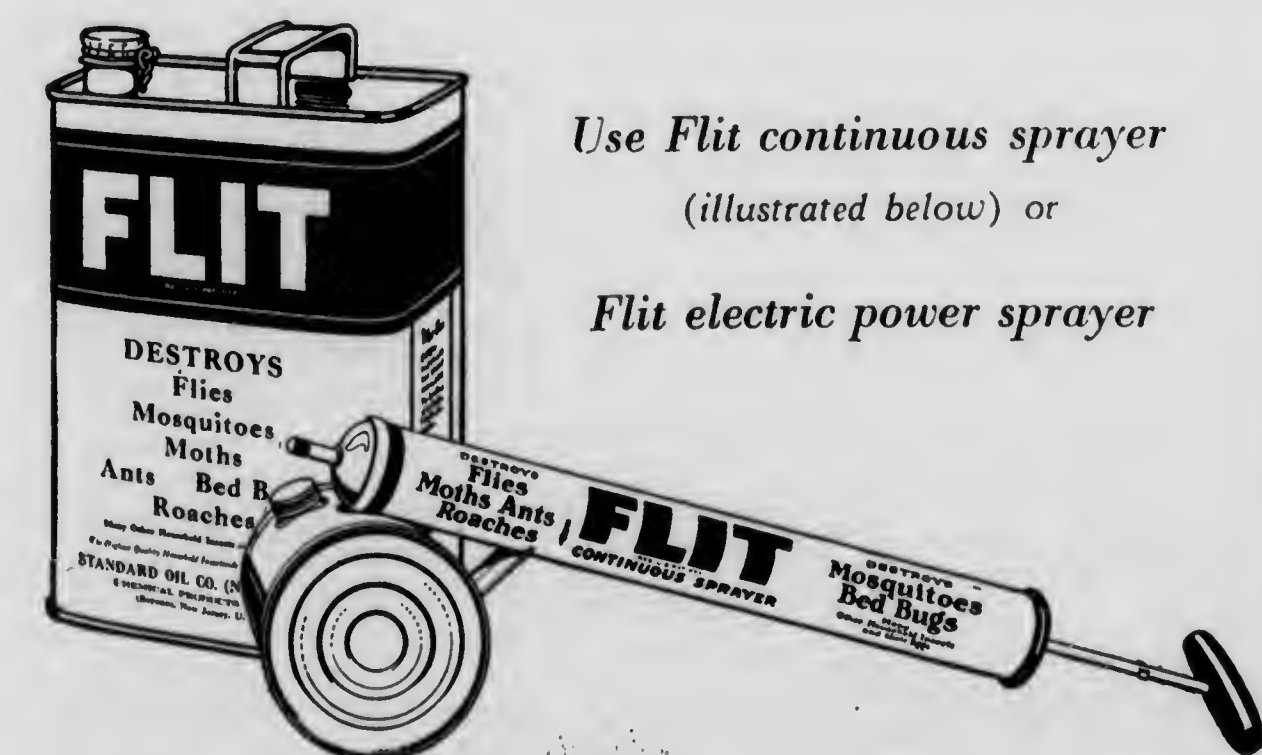
Dairy Division,
Stanco Distributors, Inc.
26 Broadway, New York City

Send me further facts regarding use of Flit in dairies. Also special introductory offer to dairies.

Name

Address

City



Use Flit continuous sprayer
(illustrated below) or

Flit electric power sprayer

NUTRITION — DIET — HEALTH

THE BEST FOR EVERY CHILD

What the best and wisest parents want for their own child, that must the community want for all its children. To create this desire in every school community is the aim of the Home and School Association.

When that crisis came to our country just a few short years ago and we found our men were not of average height and health; we turned to the school with the query "What is the matter that our schools are not turning out fine specimens of men and women?" But closer study soon showed that before the schoolroom days there was some lack that needed righting. Government physicians, while examining men for enlistment in the army, had found that the chief cause of defects was due to a lack of oversight and good care during the early years of childhood.

Immediately we turned to the babies. They are so utterly helpless and dependent that the need of watchful care has been appreciated and given; but on reaching the age when they could stand alone, run about on their own feet, extreme babyhood care relaxed and "The Toddlers" more and more were not so carefully guarded.

Colds, measles, whooping-cough, tastes (and more) of all sorts of foods, the various dangers of childhood, had done their work and on entering school we are dumbfounded at the cards our children bring home asking that we consult our physician about Paul or Virginia.

The doctor looks them over and says, "This is lack of careful watching during the Toddler Age." You did not realize this condition could come to a baby that had been perfect! It is not lack of parental affections. It is rather pre-occupation with other matters. Many times it is the struggle to keep family expenses within the income that sends children to school with pale faces, thin bodies and heavy eyes, showing the lack of proper food, insufficient sleep and the appearance of being too closely housed.

To overcome these conditions, the Home and School Association has had the vision and coined the slogan "Every child entering school physically fit." This means that mother's attention is more closely drawn to the needs of her run-about. And if you would be up-to-date in the health and education world today, your program must include something for "The Toddlers." To do this a definite plan was needed so the National President, Mrs. Reeves, sent out the call for "A Summer Round-Up." This means that each local Parent-Teacher Association was asked to get the names of all children who will enter school for the first time next fall and ask the parents to have them examined by their own physician. (Or the Association will provide a physician who will do this.)

The first place in Pennsylvania to respond to this call was Oxford, in Chester County, a small borough of about 3000 persons. On reporting the work done at their county convention it was a surprised delegation that learned they were the only ones in the whole state to do this work. When asked "How they did it?" the answer was "Easily. We asked our physicians if they would examine the children, and a day was set. Where parents could not take the child, the president of the Association took her own car, taking mother and child to the doctor."

There was nothing difficult; others caught the vision, and today hundreds of children are going into schools in September ready to stand "physically fit" for the school room strain. If this check-up is made in early summer, if treatment is needed in any case and begun at once there will be time for corrections and sufficient improvement in health by September to be able to do efficient work; or to have learned that the child should not be in school until handicaps can be removed.



Howard Jr. is one year old. He already has established a fondness for his diet of orange juice and green vegetables in addition to his milk

But to make this most effective some preliminary work ought to be done. Attractive programs are needed for group meetings. Everywhere organizations interested in children have wanted to help. The American Medical Association furnished the examination blanks; State Departments of Health furnished speakers for group meetings; the Philadelphia Inter-State Dairy Council furnishes messages on best foods for children and Health Plays. The school nurse with her splendid cooperation gives an individual message.

Mother has learned that the story of the Three Bears has helped Bobbie get his much needed porridge down; and just passed this information to Jamie's mother who had not realized what a fine health story could be gotten here. The story of the Three Vegetable Men and how Old Witch Ignorance stole away Billy Beet, will put vegetables in their important place and make them friends.

The baby chicks which Charles loves have helped him eat right foods. Mother tells of their needs and hunt for the 4 G's; Grain, Greens, Grit and Grubs. So Charles finds his four G's too,—grain in his whole grain cereal, greens in

(Continued on page 9)

POINTERS ON PRESSURE COOKERS

A steam pressure cooker is a steam pressure cooker, and so far as some people are concerned that is all there is to it. But a cooker may be something else if it is too large or too small, if it is hard to regulate or if, instead of being useful all the year around, it is not worth the room it takes.

A good cooker has straight sides which give the greatest amount of room

ICE CREAM IS NUTRITIOUS

Did you ever stop to think how many delicious things you can have in a serving of ice cream? Consider how dairy and orchard, tropic grove and garden—all yield of their best to give variety to this healthful dish.

The nourishment of cream and chocolate, the appetizing appeal of wholesome fruits from the world's finest orchards and gardens, now delectably these are combined to make ice cream not only a simple dessert and a unique aid to entertainment, but a direct contribution to health!

World wide nutrition authorities of ice cream:

It is a valuable food, containing vitamins essential to health and growth.

Mineral matter necessary for building bones and teeth. Butter fat and sugar for energy and bodily heat.

Since it contains all the food elements of milk, ice cream can be classed as a protective food. It should be used throughout the year because of its food value.

Ice cream is not only a food for all seasons but for all ages. Invalids, too, are often given this easily assimilated food when nothing else tempts. Frozen dishes constitute an acceptable way of serving nourishment in an attractive and easily digested form.

It is rich in bone building material, supplying energy and food elements that protect against disease. Ice cream should be considered as another way of getting children to eat the milk and butter fat they need.

Mothers can answer their children's desire for ice cream with confidence, knowing that it has an important place in the balanced diet on which largely depends a strong body and an alert mind—the birthright of every child.

PICNICS TO ORDER

Picnics and meals out-of-doors during warm weather, which bids fair to continue for a few months, can be planned on short notice if a picnic basket is kept handy. The kitchen pots and pans may be called into service if necessary, but a few utensils, just for picnics, save the trouble of scouring the indoor cooking equipment after it has been used over an open picnic fire. An experienced picnicker needs little more than a sauce pan or deep frying pan to cook anything from coffee to biscuits, but a coffee pot, a long fork, a sharp knife and a large spoon have their uses. A large salt cellar for salt and a large one or a screw top jar for sugar keep these necessities ready for use. A supply of tin or aluminum cups are usually the only serving dishes needed. Paper cups do well for cold drinks, and paper plates and napkins do away with dish-washing but they are not always considered necessary for a successful picnic. With a basket stocked with sugar, salt, matches, a few newspapers and the minimum of cooking and eating equipment, it is a short job to get ready for a meal in the woods.

Every human being has obligations to society beyond the home, and the organized farm women are taking hold of community problems, which have long needed the dynamic intelligent, and sympathetic interest of persons whose social conscience is active.—A. R. Mann.

Aunt Ada's Axioms—The way to teach children to accept responsibility is to give them responsibilities to accept.

THE BEST FOR EVERY CHILD

(Continued from page 8)

his spinach, beets and cabbage; grit or minerals in milk, vegetables and fruit, grubs from egg, milk, small amounts of meat and fish.

Building a perfect child is not all foods, it is an observance of the whole "Eight Rules of the Health Game" which make for splendid physical development. Side by side with food, and just as important, is the question of rest—more sleep—more rest. It must attain if our nervous, underweight arrives at normal poundage.

But the physical is not the only development, for the whole child goes to school and it is none too soon to rank during "The Toddler Age" of the Mental and Spiritual development. The day of teasing and tormenting little folks "to make them manly and be able to take their own part" is past. Today we teach them the spirit of fair play.

The truly great father or mother is not only the one who succeeds in doing great things for their child, but in doing all the little things in a great spirit.

It is J. G. Holland who says—"In the homes of America are born the children of America, and from them go out into American life American men and women. They go out with the stamp of these homes upon them, and only as these homes are what they should be, will the children be what they should be."

AGRICULTURAL PRICES

PASS LOWEST POINT

Although prices of most farm products declined strikingly in the past year, the lowest point apparently is past, at least for the present, says Dr. G. F. Warren, agricultural economist at the state college of agriculture of the New York State College of Agriculture.

During the past year, the index of prices paid to farmers for food products dropped from 161 to 142, while the index for all farm products dropped even more. Some of the facts which Dr. Warren points out as indicating that the low point in farm prices is past are the shortage of cattle and the increases in grain prices. The shortage of cattle, he says is beginning to have an influence on the price of beef, butter, and milk, while unfavorable weather is responsible for a rise of 20 cents in the price of corn on the Chicago market during the past month. During the same time wheat rose 20 cents.

Half the jobs that get put off never get done.

TRADE MARK **NICE** REG. U.S.A.

THE NAME TO GO BY—WHEN YOU GO TO BUY

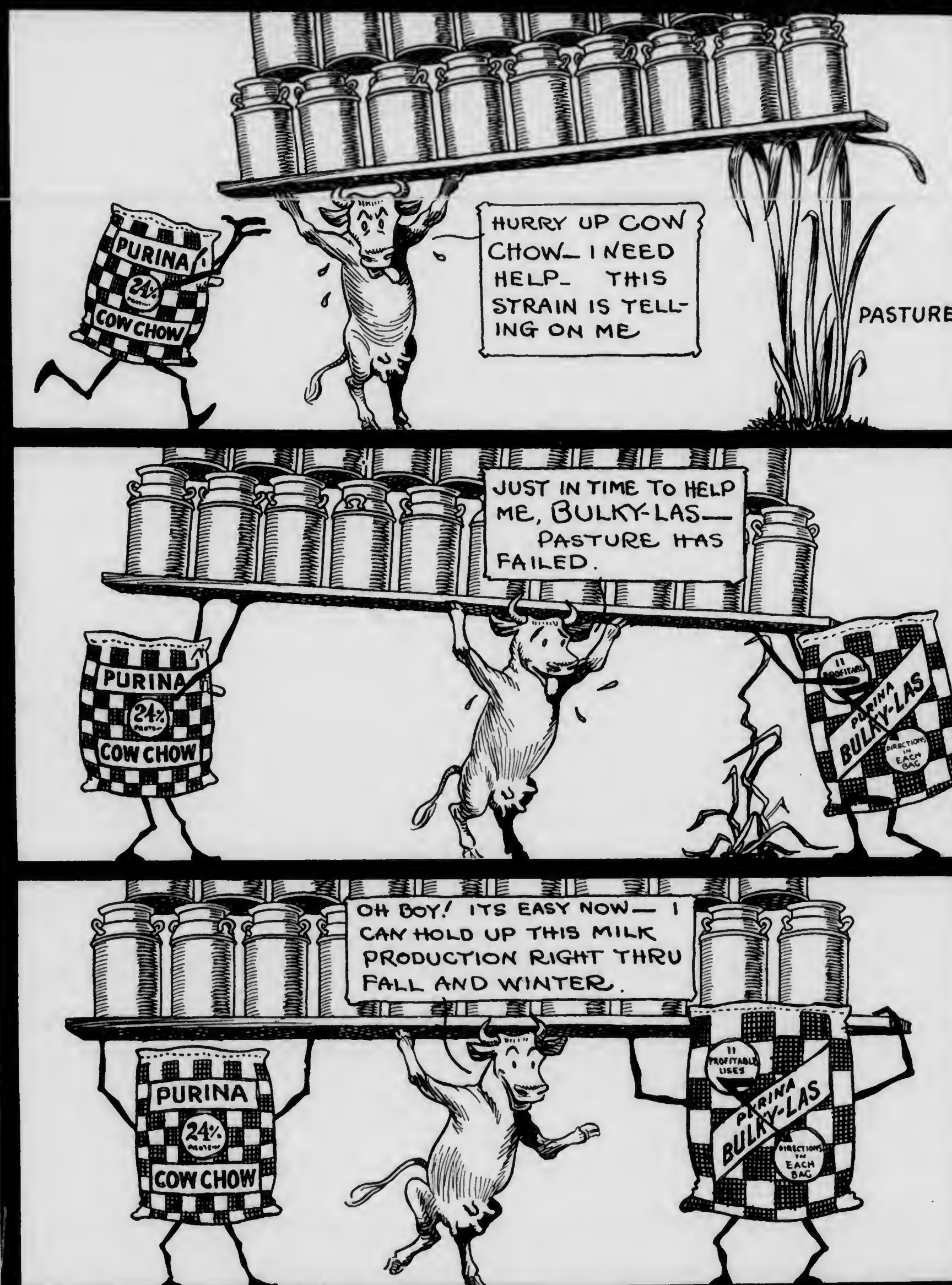
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No milk slump with help like this



Order Purina Chows from the store with the checkerboard sign.

PURINA MILLS, 854 Gratiot Street, St. Louis, Mo.

Seven Busy Mills Located for Service

Write us for a Purina Cow Booklet—free.

High Grade Dairy Cows

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We handle all kinds of cattle
HOLSTEINS — GUERNSEYS — JERSEYS
A Specialty

All cows tuberculin tested and sold subject to a 60 or 90 day retest and fully guaranteed in every respect.
Free delivery any distance.

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Wood—Tile—Cement—Metal

ROUND WOOD TANKS

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DAIRY EQUIPMENT

BARN

FREE CATALOGUE AND LOW PRICES NOW



E. F. SCHLICHTER CO.

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NORRISTOWN, PA.

CLIP YOUR COWS IT MEANS MORE—

Cleaner and Better Milk
Easier to keep them clean, make them feel more comfortable and keep dirt out of the milk pail.
CLIPPING improves the health of CATTLE, HORSES, MULES, etc. Use a GILLETTE PORTABLE ELECTRIC CLIPPING MACHINE. Also furnished with GROOMING ATTACHMENTS for cleaning. Operates on the light circuit furnished by any Electric Light & Power Co. or by any make of Farm Lighting Plant.
Price list free on request
GILLETTE CLIPPING MACHINE CO.
129 West 31st St., Dept. 2, New York, N. Y.

in 1925

115092 lbs. Milk from 13 cows
at \$1.22 per hundred feed cost

in 1926

142289 lbs. milk from 16 cows
(including some 2-year-old heifers)
at \$1.08 per hundred feed cost

— according to cow test records —

COW Testing Association records are public. Both the milk and feeds (roughage and grain) are weighed and recorded by the Cow Testing Association supervisor. He is entirely disinterested in any particular feed.

Amco Feed Mixing Service feeds made these Cow Testing Association records the last two years in the herd of Walter C. Lee at Burgettstown, Pa.

The results of using Amco Feed Mixing Service feeds are obtained year after year. Good feeds, fed liberally, keep cows in condition. Well conditioned cows produce regularly and well.

American Milling Company,
Peoria, Ill.

Burgettstown, Pa.

Gentlemen:

My herd of 12.42 cows gave 115,092 pounds of milk at a feed cost of \$1.22 per cwt.

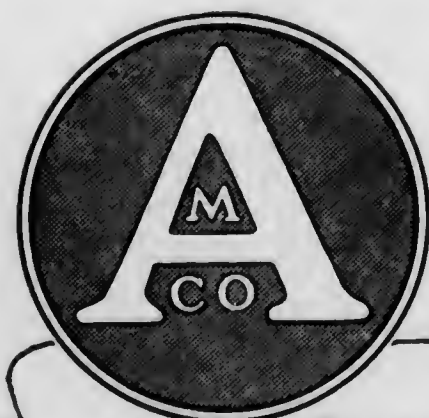
The next year the same cows with the addition of some two-year heifers, 15.92 cows, gave 142,289 pounds of milk at a feed cost of \$1.08. Feed in each case means everything the cows eat.

These are Cow Testing Association records and are a matter of public record.

The grain feed used both years was Amco Feed Mixing Service Open-Formula Feed, mixed by the American Milling Company. Have used this feed for four years and find it very satisfactory.

Yours truly,

(Signed) WALTER C LEE



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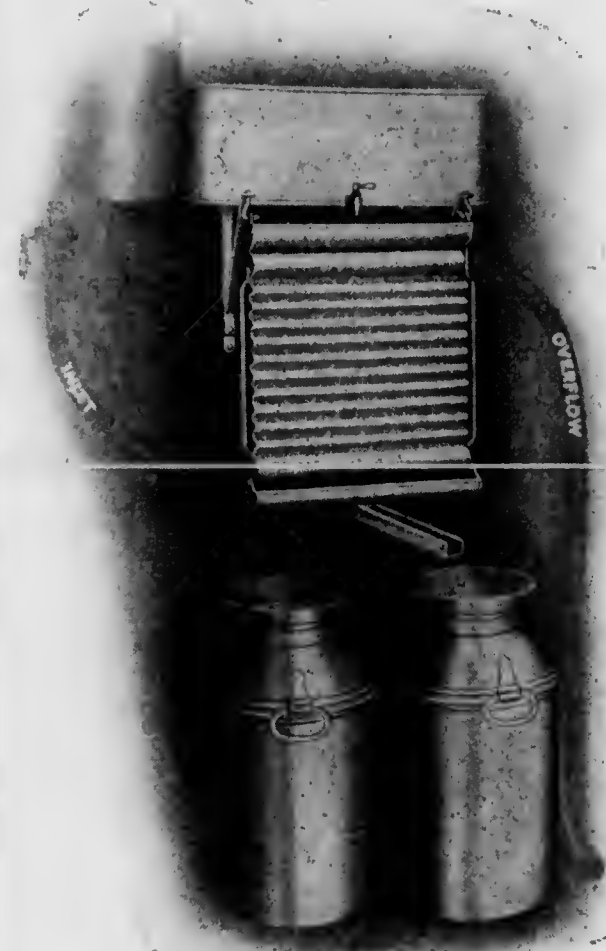
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INTER-STATE MILK PRODUCERS' ASSOCIATION RECEIVING STATION PRICES in effect July 1st, 1927.

Subject to change whenever warranted by market conditions.

These quotations are based on 3% butterfat milk with a differential of 4 cents for each tenth point and 2 cents for each half tenth point up or down, and are for all railroad points. (Inland stations carry differentials subject to local arrangements.)

This price list is issued with the understanding that it is net to producers and that all buyers using it as a basis of payment to producers shall in addition thereto make the following contributions and payments.

(1) To the Philadelphia Inter-State Dairy Council 2¢ per hundred pounds (46½ quarts) of all milk bought of any producer at price listed hereon.

(2) To the Inter-State Milk Producers' Association 2¢ per hundred pounds (46½ quarts) of all milk bought from members of said association.

(3) To the Philadelphia Inter-State Dairy Council 2¢ per hundred pounds (46½ quarts) of all milk bought from other producers at price listed hereon.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets and for an educational campaign advertising the food value of dairy products.

Basic price July first. June surplus price.

Miles	Freight rate per 100#	Basic quantity Price 3% milk	Test	Class 1		Class 2	
				Per 100#	Test	Per 100#	Test
1 to 10	inc.	.268	\$2.79	: 3.	\$1.61	: 3.	\$1.27
11 to 20	"	.233	2.77	: 3.05	1.63	: 3.05	1.29
21 to 30	"	.303	2.75	: 3.1	1.65	: 3.1	1.31
31 to 40	"	.313	2.74	: 3.15	1.67	: 3.15	1.33
41 to 50	"	.333	2.72	: 3.2	1.69	: 3.2	1.35
51 to 60	"	.343	2.71	: 3.25	1.71	: 3.25	1.37
61 to 70	"	.364	2.69	: 3.3	1.73	: 3.3	1.39
71 to 80	"	.374	2.68	: 3.35	1.75	: 3.35	1.41
81 to 90	"	.389	2.67	: 3.4	1.77	: 3.4	1.43
91 to 100	"	.399	2.66	: 3.45	1.79	: 3.45	1.45
101 to 110	"	.414	2.64	: 3.5	1.81	: 3.5	1.47
111 to 120	"	.424	2.63	: 3.55	1.83	: 3.55	1.49
121 to 130	"	.434	2.62	: 3.6	1.85	: 3.6	1.51
131 to 140	"	.450	2.61	: 3.65	1.87	: 3.65	1.53
141 to 150	"	.460	2.60	: 3.7	1.89	: 3.7	1.55
151 to 160	"	.475	2.58	: 3.75	1.91	: 3.75	1.57
161 to 170	"	.480	2.58	: 3.8	1.93	: 3.8	1.59
171 to 180	"	.490	2.57	: 3.85	1.95	: 3.85	1.61
181 to 190	"	.505	2.55	: 3.9	1.97	: 3.9	1.63
191 to 200	"	.510	2.55	: 3.95	1.99	: 3.95	1.65
201 to 210	"	.520	2.54	: 4.	2.01	: 4.	1.67
211 to 220	"	.535	2.52	: 4.05	2.03	: 4.05	1.69
221 to 230	"	.540	2.52	: 4.1	2.05	: 4.1	1.71
231 to 240	"	.550	2.51	: 4.15	2.07	: 4.15	1.73
241 to 250	"	.556	2.50	: 4.2	2.09	: 4.2	1.75
251 to 260	"	.566	2.49	: 4.25	2.11	: 4.25	1.77
261 to 270	"	.576	2.48	: 4.3	2.13	: 4.3	1.79
271 to 280	"	.581	2.48	: 4.35	2.15	: 4.35	1.81
281 to 290	"	.595	2.46	: 4.4	2.17	: 4.4	1.83
291 to 300	"	.600	2.46	: 4.45	2.19	: 4.45	1.85
				: 4.5	2.21	: 4.5	1.87
				: 4.55	2.23	: 4.55	1.89
				: 4.6	2.25	: 4.6	1.91
				: 4.65	2.27	: 4.65	1.93
				: 4.7	2.29	: 4.7	1.95
				: 4.75	2.31	: 4.75	1.97
				: 4.8	2.33	: 4.8	1.99
				: 4.85	2.35	: 4.85	2.01
				: 4.9	2.37	: 4.9	2.03
				: 4.95	2.39	: 4.95	2.05
				: 5.	2.41	: 5.	2.07

By order of the Board of Directors.

H. D. Allbach President. *Robert Baldwin* Secretary.
Ninth Floor West., Bovertown Bldg., Phila., Pa.
Issued June 28th, 1927

INTER-STATE MILK PRODUCERS' ASSOCIATION
PHILADELPHIA PRICES in effect July 1st, 1927.

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The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets and for an educational campaign advertising the food value of dairy products.

Basic price July 1st.				June surplus price.			
Test	Quantity	Price	Class 1	Quantity	Price	Class 2.	
per cent.	per 100%	qt.	per 100%	per qt.	per 100%	per qt.	
3.	\$3.29	7.1	\$2.19	4.7	\$1.85	3.95	
3.05	3.31	7.1	2.21	4.75	1.87	4.	
3.1	3.33	7.15	2.23	4.8	1.89	4.05	
3.15	3.35	7.2	2.25	4.85	1.91	4.1	
3.2	3.37	7.25	2.27	4.9	1.93	4.15	
3.25	3.39	7.3	2.29	4.9	1.95	4.2	
3.3	3.41	7.35	2.31	4.95	1.97	4.25	
3.35	3.43	7.4	2.33	5.	1.99	4.3	
3.4	3.45	7.4	2.35	5.05	2.01	4.3	
3.45	3.47	7.45	2.37	5.1	2.03	4.35	
3.5	3.49	7.5	2.39	5.15	2.05	4.4	
3.55	3.51	7.55	2.41	5.2	2.07	4.45	
3.6	3.53	7.6	2.43	5.2	2.09	4.5	
3.65	3.55	7.65	2.45	5.25	2.11	4.55	
3.7	3.57	7.65	2.47	5.3	2.13	4.6	
3.75	3.59	7.7	2.49	5.35	2.15	4.6	
3.8	3.61	7.75	2.51	5.4	2.17	4.65	
3.85	3.63	7.8	2.53	5.45	2.19	4.7	
3.9	3.65	7.85	2.55	5.5	2.21	4.75	
3.95	3.67	7.9	2.57	5.5	2.23	4.8	
4.	3.69	7.95	2.59	5.55	2.25	4.85	
4.05	3.71	8.	2.61	5.6	2.27	4.9	
4.1	3.73	8.	2.63	5.65	2.29	4.9	
4.15	3.75	8.05	2.65	5.7	2.31	4.95	
4.2	3.77	8.1	2.67	5.75	2.33	5.	
4.25	3.79	8.15	2.69	5.8	2.35	5.05	
4.3	3.81	8.2	2.71	5.8	2.37	5.1	
4.35	3.83	8.25	2.73	5.85	2.39	5.15	
4.4	3.85	8.3	2.75	5.9	2.41	5.2	
4.45	3.87	8.3	2.77	5.95	2.43	5.2	
4.5	3.89	8.35	2.79	6.	2.45	5.25	
4.55	3.91	8.4	2.81	6.05	2.47	5.3	
4.6	3.93	8.45	2.83	6.1	2.49	5.35	
4.65	3.95	8.5	2.85	6.1	2.51	5.4	
4.7	3.97	8.55	2.87	6.15	2.53	5.45	
4.75	3.99	8.6	2.89	6.2	2.55	5.5	
4.8	4.01	8.65	2.91	6.25	2.57	5.5	
4.85	4.03	8.65	2.93	6.3	2.59	5.55	
4.9	4.05	8.7	2.95	6.35	2.61	5.6	
4.95	4.07	8.75	2.97	6.4	2.63	5.65	
5.	4.09	8.8	2.99	6.4	2.65	5.7	

By order of the Board of Directors.

H. D. Allebach President.
Robt. W. Balderston Secretary.

Ninth Floor West.,
Boyetown Bldg., Phila., Pa.
Issued June 28th, 1927.

July, 1927

MILK PRODUCERS REVIEW

Page 11

NEW JERSEY DAIRYMEN
PLAN TRIP TO BELTSVILLE

The New Jersey Dairymen are planning a state-wide tour for themselves and friends to the government dairy farm at Beltsville, Maryland, on August 9th, 10th, and 11th. The plan is to spend one day at Beltsville and those who want to stay over will spend the next day at the Arlington farm where the government carries on its plot and experimental work in forage crops.

There is being created a lot of interest in the State of New Jersey about this tour and the following are some of the lines that the Bureau of Dairying in the U. S. Department of Agriculture is carrying on at the Beltsville farm and from which the visiting dairymen can get first hand information:—The Mineral Requirements of Cows; Inbreeding, Linebreeding and Outcrossing Experiments; Feeding Sprouted Oats and Wheat Germ to Correct Breeding Troubles; The Proving of Bulls; The Relation of Conformation and Anatomy to Milk and Fat Producing Capacity; Alternate Heavy and Light Feeding; Dairy Sanitation (Fly Control—Steam Sterilization of Milk Machines, and etc.) Sweet Clover Experiments and the Influence of Transportation on the Creaming of Milk.

The committee in charge of this tour consisting of E. J. Perry and other prominent dairymen have secured reasonable rates at the Ebbitt Hotel in the heart of Washington. The rates offered are as follows:—\$2.00 per day each person, two in a room, all rooms with bath and \$2.50 and \$2.00 per day for single rooms. These rates are on the European plan but the hotel serves meals at these prices: Breakfast, 60c; luncheon, 60c; and dinner, \$1.25. Also an a la carte service.

Any dairymen interested in this trip should get in touch with either their county agent or E. J. Perry, Extension Specialist at New Brunswick, and make their reservations for probably the entire hotel space will be spoken for before the day of the tour. Anybody is welcome to attend this tour and it would be a great opportunity for the dairymen to see just what their Federal Government is doing for their betterment.

One new idea often means thousands of dollars to a dairyman. Dairying is often spoken of as a monotonous job. Perhaps it is at times, but "making a break for the open" on a trip of this sort will relieve the monotony—good roads all the way. Begin to plan for it now.

A checking account at the bank simplifies paying the farm and family bills.

For healthier, happier bulls!
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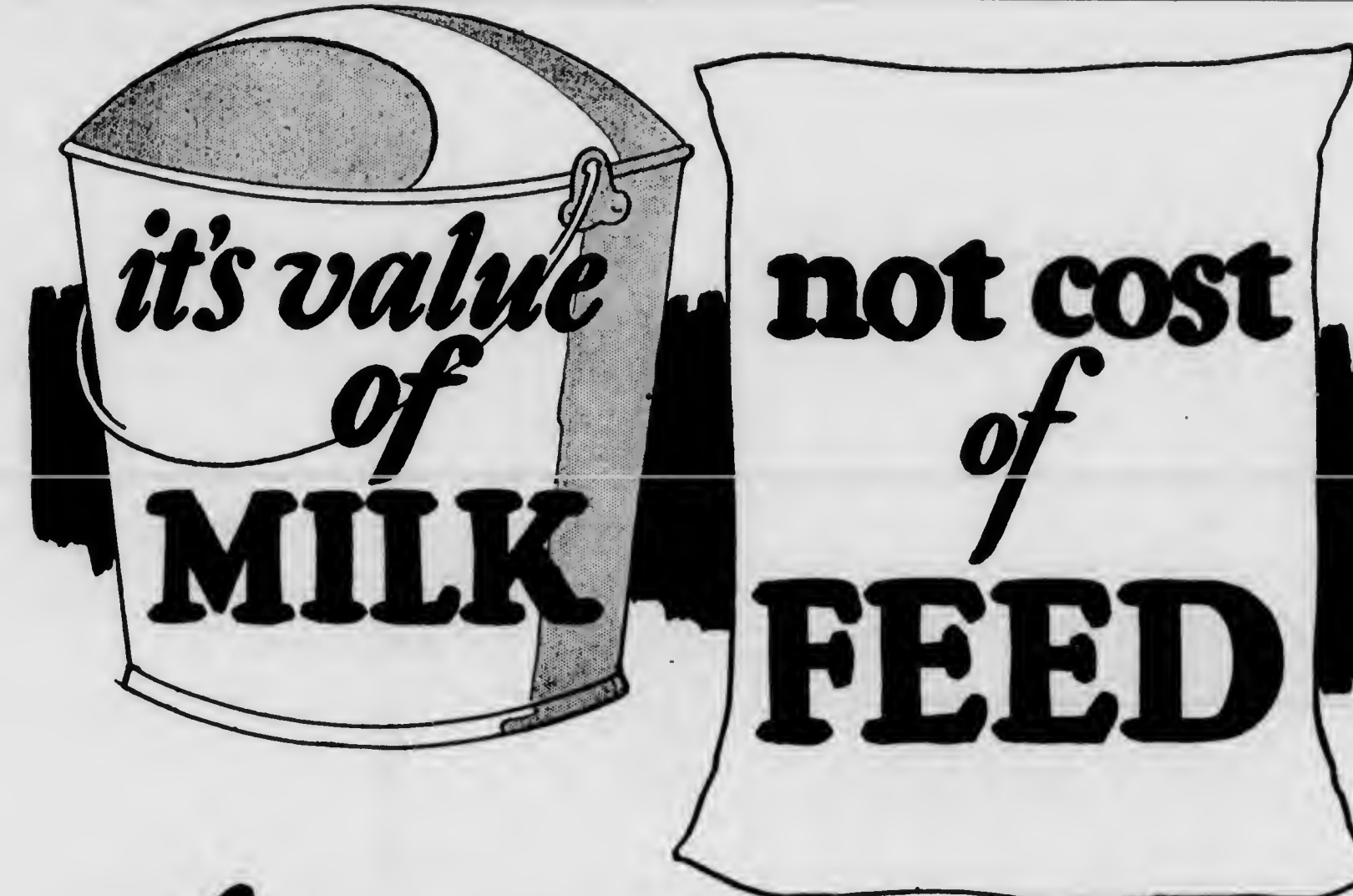


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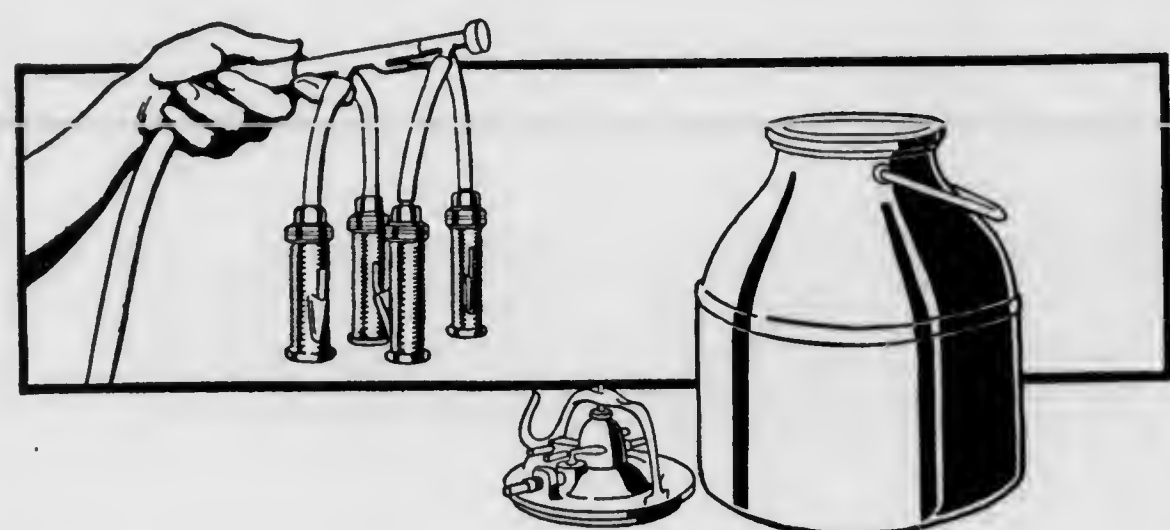
Farquhar Boilers have been designed for the farmer, dairyman and creamery. Most economical for supplying steam, heat, hot water. Built Vertical, Horizontal, Return Tubular; burn wood, coal or oil. Sizes from 1½ up to 150 H. P. Built in full accord with the American Society of Mechanical Engineers' Code and meet the requirements in any State.

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A. B. FARQUHAR CO., Limited Box 461, York, Pa.

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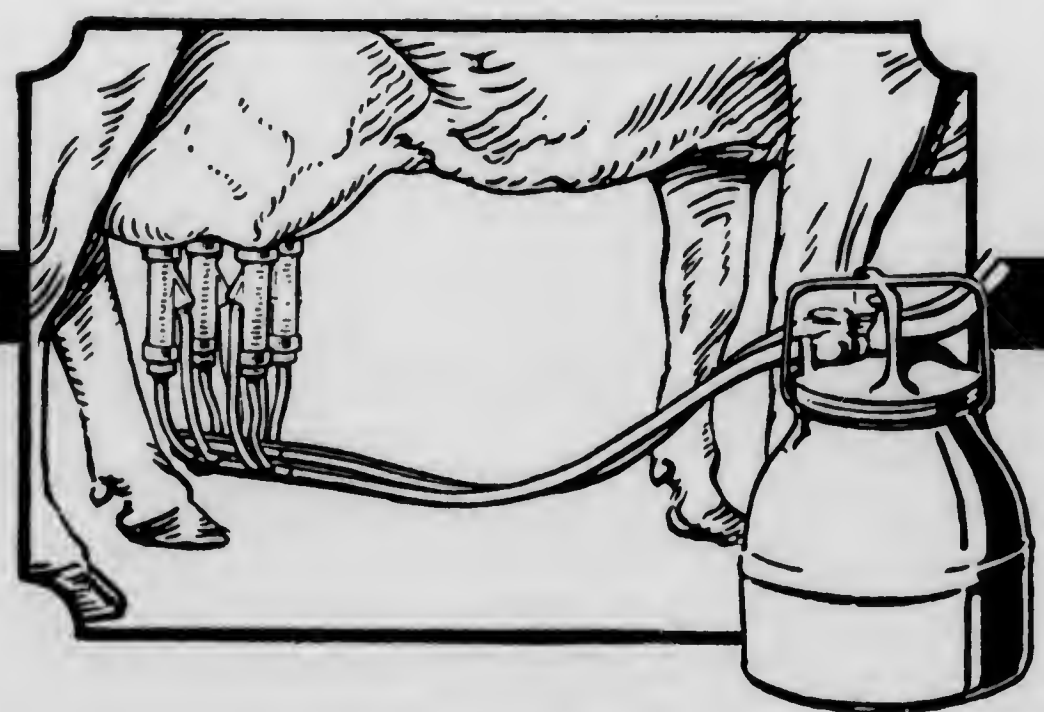
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Hundreds of producers of Grade A and Certified Milk in every section of the country declare the De Laval Milker an invaluable aid in the production of clean milk, and an assurance of regular premium money.

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CHICAGO
600 Jackson Blvd.

SAN FRANCISCO
61 Beale Street

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2. De Laval Milkers now in their eleventh year of use.
3. 83.27% of the users report average saving of 2 hrs., 12 mins. per day.*
4. 97.13% of the users say it agrees with their cows.*
5. 99.4% of the users say they get as much or more milk as by hand milking.*
6. 9.49% average increase in production per cow reported by those who have records.*
7. 94.80% of users say their De Laval is easy to keep in a clean and sanitary condition.*
8. Average bacteria count of all reporting, 14,542—62% report counts of 10,000 and less.*
9. 96.45% of De Laval users say their milker is "the best," "one of the best," or a "good" investment.*

*Based on reports from 1844 De Laval Milker users in all parts of the U. S. and Canada.

De Laval Milkers

Milk Producers' Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

VOLUME VIII

WEST CHESTER, PA., AND PHILADELPHIA, PA., AUGUST, 1927

NUMBER 4

American Institute of Cooperation

Third Session Held in Chicago—Dairy Week a Feature

The third summer session of the American Institute of Cooperation, under the auspices of the cooperatives of the country and with the cooperation of the Northwestern University, was held in Wiebold Hall, Chicago, Ill., during the period running from June 20th to July 16th, 1927.

The course of study was divided into four weekly periods, each week given to specialized commodity studies. The first week was largely devoted to the study of subjects pertaining to cooperative marketing of wheat and cotton. The second week to livestock shipping and sales problems, the third week to cooperative marketing of dairy products and the fourth week to the standardization and marketing of fruits, poultry and eggs.

In addition to these general courses opportunity was given to students to secure college credits on advanced educational programs, to attend special lectures each day and thereby obtain credits for their higher collegiate work.

These various classes were under the direction of Dr. E. G. Nourse, Washington, D. C.; Professor Fred E. Clark, Northwestern University, Chicago; Prof. J. T. Horner, Michigan State College; Prof. H. E. Erdman, University of California; Prof. Paul L. Miller, Iowa State College and others.

While the various subjects on the general program were treated at length and were extremely helpful in disseminating the knowledge pertaining to all phases of the agricultural and cooperative marketing field the important meetings to the dairymen were those presented during the week of July 5th when the cooperative marketing program relating to milk and milk products were discussed.

The Dairy Sessions

The various sessions which were held morning and afternoon and in instances in the evening, were largely attended by the men holding important places in the industry, particularly in the cooperative field.

R. W. Balderston, secretary of the Inter-State Milk Producers' Association acted as chairman of the session during dairy week.

The session opened on Tuesday morning when Charles W. Holman, secretary of the American Institute of Cooperation and secretary of the National Milk Producers' Federation, presented in an interesting manner the "Present Status

of Dairy Cooperation in the United States". During the same session addresses were made by I. W. Heaps, secretary of the Maryland State Dairymen's Association on a "Suggested Set-Up for Cooperative Bargaining Associations", and A. D. Lynch, manager Dairy Department, Illinois Agricultural Association, who spoke on "The Small City Distributing Cooperative Association".

The afternoon session included addresses by H. H. Bakken, University of Wisconsin, on the "Organization Problems of Cheese Producers" and discussions of these problems, led by



One of the outstanding Dairy Farms in the Cumberland Valley District in Pennsylvania

Frank G. Swoboda, General Manager, Wisconsin Cheese Producers' Federation. A survey of New England Milk Marketing was presented by Wm. A. Schoenfeld, Department of Agriculture, Washington, D. C.

A Feature Program

The evening session of this day was given over to a feature program in which the Inter-State Milk Producers' Association and the Philadelphia Inter-State Dairy Council cooperated in reproducing, as a demonstration of their field work a complete, typical, country program, this being the same program that has been presented at many of its meetings throughout the Philadelphia Milk Shed.

The program included addresses by H. D. Allebach, president of the "Inter-State" on "Some New Problems for Our Dairymen"; C. I. Collee, Quality Control Department of the Philadelphia Dairy Council, on the subject, "Who is Making Money in Dairying and Why?"

These addresses were followed by the mock trial "Judge for Yourself", pre-

(Continued on page 10)

What a Dairy Cooperative Can and Cannot Do

By B. F. BEACH*

There are many things that either help or hinder a cooperative strength after it has been once developed.

The cooperative must remember that, as a general thing, its methods of accomplishing results are not wholly unlike corporations, which are formed by groups of men interested in an industry. Corporations combine the power of money, management and skill. The cooperative combines its products from individuals and sells them collectively. The cooperative can be and in many cases is as effectively managed as the corporations.

done very successfully, and it works best where carried out in cooperation with the milk distributors in the particular city involved.

The organized dairymen cannot expect any spectacular or phenomenal results from this work. He can be assured of a more stable market, and in a period of depression the sale of his product would be more apt to take precedent over the sale of other food products. The sales of fluid milk are more apt to remain constant. We believe that in the future one of the most promising pieces of work by the

Cooperative is that which it does to increase the demand for its product.

Going hand in hand with increasing demand is improving of quality. The Cooperative can build up the quality of its product. It can, and should, take the lead in raising the standard even at the expense of immediate losses. This work may range all the way from fostering TB eradication campaigns to detailed inspection upon farms.

The farmers are learning that the day of making consumers buy any old kind of milk, good or bad, is past, and poor business for the dairyman.

The particular way in which these matters are handled depends upon the attitude and cooperation secured through the local health authorities. Inas-

much as improved quality directly influences the demand for the product the organization which is interested in the financial returns of its members must keep abreast of the moves that should be made to keep its product on a high plane. This work requires considerable education among the producers, but those best informed realize in the long run it pays big dividends.

It is as necessary to know what a Cooperative cannot do as it is to know what it can do, if it is not to run on rocks which are usually found in the path of every organization. What are some of the "cannot" limitations?

1. The organization can only sell at a price which the market conditions will justify. The demands for spectacular price increases cannot usually be met. If, for a time, either an unjustifiably high price or an unjustifiably low price is obtained for the product, in time this condition will naturally rectify itself. The Sales Committee, or those having charge of selling the milk, must endeavor to acquaint themselves with the

(Continued on page 12)

Dairy Industry Service Being Expanded by Dept. of Agriculture

Greater assistance to dairy farmers to help solve marketing problems in meeting consumer demand is being developed by the Bureau of Agricultural Economics, United States Department of Agriculture. Methods are worked out for making monthly estimates of milk production, the expansion of market news services, and the compilation of detailed price and market cost analyses.

The bureau has been trying for many years to develop a method of estimating milk production. Most of the material gathered by the latest method tried is still in the raw state, although for a few States some analyses have been made which indicate this method will give a reasonably accurate indication of the quantity of milk produced per cow. It also seems to furnish a basis for making monthly estimates of milk production.

Lack of dependable figures showing changes in numbers of milk cows in the United States during this century has resulted in the development of an estimating system which will give figures for "cows and heifers two years old and over, January 1, kept for milk." Estimates by the use of this system show that there were about 15,900,000 head of such animals in 1900; 18,600,000 head in 1910; 21,427,000 head in 1920, and 22,481,000 head in 1925.

The figures give increases of 17 per cent in the period 1900 to 1910; 14 per cent between 1910 and 1920, and 5 per cent between 1920 and 1925. An estimated decrease of 1 per cent a year in 1925 and 1926 brings the estimated number January 1, 1927, to only 3 per cent above the number January 1, 1920.

Between 1900 and 1925, it is estimated, milk production per cow increased materially due to the increasing proportion of strictly dairy type cows milked and to improved methods of care and feeding. With present (1927) cow numbers only 3 per cent larger than in 1920 and population nearly 10 per cent greater, it is possible that milk production per capita in 1927 will be less than in 1920. Arrangements have been completed with a number of States, whereby a State agency cooperates with the Department of Agriculture, to insure more complete statistics regarding the production of manufactured dairy products than heretofore. There is need for more statistical information relating to fluid milk and cream, as well as other dairy products for cities where the market reporting service has not been established and where vast quantities of dairy products are utilized for direct consumption.

For a number of years statistical compilations have been made of figures on production, consumption, international trade and kindred topics relative to the dairy industry. The general statistical information furnished is now to be enlarged in scope, and the bureau will make detailed price and market cost analyses of each of the dairy products involving a consideration of general supply and demand conditions for the country as a whole, and a detailed study of price behavior in important market centers. Response of price to supply will be studied and, if possible, measured; conversely, response of supply to price. The influence of demand on price and of price on demand will be studied also.

It is probable, say the economists engaged in this work, that changes of income of wage earners has an influence on the degree to which a rise or a fall in price will decrease or increase their purchases. The degree to which this influence operates in each dairy product should, if possible, be determined. General business conditions and business conditions in specific industries, and the economic condition of the wage earner as indicating the purchasing power of labor should throw light upon the probable demand for dairy products. It is thus hoped to help the industry more accurately to gauge future price movements and thereby enable farmers to reduce the hazard of their business to a minimum. Another task will be to discover, measure and interpret the price-making forces of each dairy product to assist in arriving at a truer judgment of probable future prices.

The present program calls for continued development of the service in collecting foreign dairy information, dairy farm management research, research in foreign competition and prices, cooperative marketing of dairy products, and standardization and inspection. Widespread dissemination of the results of these activities in behalf of the dairy industry, by means of telegraph, radio, the press and by mail, is regarded as of great importance by the bureau, so that individual farmers and organizations may utilize the information in the conduct of their business.

The Department of Agriculture now serves the dairy industry with market news offices in 36 cities; estimates on dairy cows and milk products; foreign trade news; cold storage reports on dairy products; estimates of butter production; dairy farm production surveys; dairy situation reports monthly; dairy outlook reports annually; standards and inspection for butter and cheese, and reports on cooperative marketing of dairy products.

Farmers and farmers' organizations are urged to utilize this dairy industry service, a more detailed description of which may be obtained by writing the Bureau of Agricultural Economics, United States Department of Agriculture, Washington, D. C.

Cold Storage Holdings of Foods Show Increase

Increased cold storage stocks of poultry, meats, butter and eggs on July 1 as compared with the same date last year are reported by the Bureau of Agricultural Economics, United States Department of Agriculture.

Total holdings of frozen poultry, including broilers, fryers, roasters, fowls, turkeys, and miscellaneous poultry are placed at 50,059,000 pounds against 36,730,000 pounds July 1 a year ago, and a five-year average of 42,823,000 pounds. Meat stocks, including beef, pork, lamb and mutton, totalled 940,819,000 pounds July 1 against 705,720,000 pounds last July, and a five-year average of 889,298,000 pounds. Stocks of lard are given at 116,250,000 pounds against 120,527,000 pounds last year.

Holdings of creamery butter aggregated 90,116,000 pounds against 86,897,000 pounds last year, and stocks of case eggs were 10,551,000 cases against 9,133,000 cases on the same date a year ago. American cheese supplies are smaller, being 49,643,000 pounds compared with 54,069,000 pounds a year ago.

The Cow Testing Association And Why?

Some Definite Projects Outlined

A. A. ROUDABAUGH

From the standpoint of pleasure and profit a definite cow testing association program is well worth while.

There are many ways to prove these facts but usually the best one is the producers own actual experience. The development may be fast or slow, according to the individual farmers ability to cooperate.

An interesting example of this shown in the results achieved by Mr. X, a member of the Cumberland County Cow Testing Association, who, in two years raised the average production per cow in his herd from 7455 pounds of milk and 265.8 pounds of butterfat to 9476 pounds milk and 331.1 pounds butterfat.

Several years ago the owner of this herd was solicited as a prospect for the local cow testing association. He refused, stating that his herd was not good enough to go into cow testing association work. Some time later a neighbor of this farmer joined the association and from the favorable results obtained, convinced Mr. X, that there was merit in the work.

After the cow testers first visit to the farm of Mr. X, weighing the milk and the feed and making a general survey of conditions, it was evident that the methods could be improved. The first and most essential factor of the testing program was to get the producers full cooperation not only in his feeding program but also in the condition of his herd. This was possible as the results obtained by his neighbor were such as to indicate that the proper development of this program was profitable.

Some Suggestions to the Farmer
After inspecting the cows and analyzing production conditions the cow tester suggested a balanced ration and feeding for profit. That freshening and breeding dates be recorded so that the cow's ability to produce during the lactation period be established and to know just when to turn her dry and to feed her up, provided of course that she is a persistent producer, so as to have her in shape during the next freshening.

It was later learned that by changing production methods slightly and by making changes in the ration further economies were possible. These changes in themselves paid for the entire cost of cow testing association expenses. Close cooperation brought about the desired result. Mr. X said "If I only maintain that improvement for a year I will have saved approximately \$500. But this represented only part of the truth as may be shown by the following record.

This production gain was not all accomplished by feeding and care alone. During the two years eight of the original 12 cows in the herd were sold to the butcher. They were unprofitable producers. The sale of these cows netted the producer \$460. As one was sold enough funds would be added to the sale price to enable the purchase of a better cow or a pure bred heifer. In

	Aver. No. Cows	Aver. Milk Prod.	Aver. But. Fat
April, 1925 to April, 1926	12.45	7455	265.8
April, 1926 to April, 1927	13.08	9476	331.1

Increase 2021 65.3
This production gain was not all accomplished by feeding and care alone. During the two years eight of the original 12 cows in the herd were sold to the butcher. They were unprofitable producers. The sale of these cows netted the producer \$460. As one was sold enough funds would be added to the sale price to enable the purchase of a better cow or a pure bred heifer. In

instances cows of known production were purchased. Approximately \$800 was spent in this replacement work. But what of the increased investment? Actual inventory of the herd showed an increase of \$1200, in total value over that of the original herd. In other words the increase of 26500 pounds of milk and 854 pounds fat represents about 35% increase over the production rate or \$1000 increase in return over that obtained prior to the adoption of cow testing association methods.

In addition to the improvements in herd conditions and milk production, this farmer has made improvements to his barn, and added other labor saving equipment. Under agreement with the owner of the farm a silo has been erected and other major betterments are planned for the future.

Dairy development along this line is sound and numerous instances of such development can be cited in the Cumberland County Cow Testing Association.

Farmers' Cooperatives in Pennsylvania Do \$35,000,000 Business

At least one out of every five farmers in Pennsylvania is a member of a cooperative buying or selling association, according to the State Bureau of Markets. In 1926, the 45,510 farm cooperators did a \$35,000,000 business.

Similar figures for 1925 show that cooperation among farmers is on the increase. The 1926 figures reveal an increase of 2520 in membership and over \$4,000,000 in volume of business when compared to the 1925 totals.

Milk Sales Increase

The largest increase in business in 1926, as compared with 1925, took place in the cooperative marketing of milk. Sales of milk and milk products amounted to \$28,545,312 as compared with \$25,033,453, in 1925, an increase of 14.0 per cent.

Sales of fruit and vegetable associations totaled \$1,016,124 against \$1,105,824, a decrease of 8.1 per cent. Actually, the volume of fruit and vegetables handled by these organizations was considerably larger than that of 1925, but prices were so much lower in 1926 that sales in dollars were smaller than those of the previous year. Three incorporated pools sold \$73,892 of wool, as compared with \$79,183 in 1925, a decrease of 6.7 per cent.

More Eggs Sold

Cooperative egg sales amounted to \$96,000 against \$89,910 in 1925, an increase of 6.8 per cent. Sales of livestock by cooperative associations amounted to \$134,412 and most of the business transacted was in dairy cattle.

The sales of farm supplies by cooperative purchasing associations in 1926 were 16.6 per cent larger than in 1925, amounting to \$5,311,299 as compared with \$4,553,744. Practically all of this increase was due to an increase in the number of such associations and also to a small growth in the physical volume of supplies sold. Thirty-four identical local purchasing associations sold \$1,480,910 of farm supplies in 1926 against \$1,473,215 in 1925, an increase of one-half of one per cent.

Keep Your Cows, So They Will Keep You

A. L. HAECKER

Surely every man who keeps and milks a cow is ambitious to make his work pleasant and profitable. Still, it is rather embarrassing, and certainly not it compliment to our wisdom to know that 53% of all the cows we keep in this country are unprofitable. One cow out of three is a boarder. We must not, however, blame the cows too much, for we really are most to blame as many of our cows would give a profit if they had a chance.

In the case of the average cow-keeper it is under-feeding which causes our greatest loss, and this is not a hard matter to remedy. It takes many years to breed up a good herd, but a better system of feeding can be put into operation in a single season.

Our Colleges and Experiment Stations have shown conclusively that there is no profit in under-feeding. This is true because the bulk of a ration that a cow receives is for board, or as we call it, "maintenance." What an animal consumes over and above maintenance is the part of the ration which gives us a profit. If we feed only a maintenance ration, we cannot expect a profit. To produce best results, then, we must feed both liberally and economically. At the same time we should get rid of our unprofitable animals in order to prevent over-production and destroying a market which now is excellent.

The two principal elements of a ration are known as carbohydrates and protein. All things considered, our best and cheapest source of carbohydrates is found in silage, and this means we should use the silo more than we are now doing, for the carbohydrates form the bulk of the feed. With alfalfa and the clovers we have our cheapest and best source of protein, and in these two feeds, namely silage and legume hay or pasture, we can make up the bulk of our ration in a balanced and succulent form.

A Cow Testing Association recently reporting from Indiana calls attention to the fact that the farmers who made the most from their cows used silage not only during the winter months, but also to supplement pasture in the summer. Wisconsin has been a wise teacher these many years in good dairy farming. They are now using one silo for each thirty head of cattle, and still their agricultural advisors claim they are much under-supplied. They have 170 Cow Testing Associations, and it is interesting to note that the big-producing cows and herds are fed liberally on silage and legume hay. This is convincing argument, and it seems to me it should be our first consideration, for it is much easier to lower the cost of production than to increase the market price of the commodity.

To keep our cows so they will give us a profit is one of the biggest problems in agriculture, because dairy products bring to the farmer more money than any other crop or line of industry. Last year dairy products surpassed even the corn and cotton crops in gross sales. Let our slogan this coming year be "Not more cows, but better cows, liberally supplied with economical rations."

Authorities say that the prices being paid for milk justifies feeding the best producers to get a few more pounds each day. Weigh the feed; weigh the milk; keep a pencil and tally sheet near the scales.

Winter Wheat Yield in Pennsylvania Lower

Yield Probably 2½ Million Bushels Less than the Average

Pennsylvania will produce this year approximately 19,990,000 bushels of winter wheat, almost 3,500,000 bushels less than last year and over 2,500,000 less than the five year average, according to estimates as of July 1 made by the Federal-State Crop Reporting Service.

The condition of wheat in the central, southcentral and southeastern sections, the district which produces 75 per cent of the State's crop, is just as good or better than a year ago. The highest condition is reported from the southeastern counties. Infestations of the Hessian fly are reported from Lawrence and Butler counties and the damage by it was unusually heavy in Lycoming, Union, Snyder, Northumberland and Montour counties and in Adams and York counties.

A slight decrease in acre yield and a 10 per cent reduction in acreage as compared to last year are the reasons for the decreased production forecast for this year. The acre yield is indicated at 19 bushels, one bushel less than in 1926 but a fraction of a bushel more than the five-year average. The acreage is estimated at 1,053,000, or about 90 per cent of the 1926 figure.

The production of winter wheat in the United States will aggregate about 579,400,000 bushels, over 20,000,000 bushels more than the five-year average but 47,000,000 less than in 1926.

The weather conditions have been ideal for the harvest in the southern counties of Pennsylvania. The State Bureau of Markets expects that the loss suffered from the Angoumois grain moth, a pest which six years ago infested more than half of the wheat received at the Philadelphia and Baltimore terminals, will be less than a year ago when 20 per cent of the shipments were infested. Prompt threshing of the grain after harvesting has been the main cause for this decrease. It is urged that this practice be continued.

New Jersey State Board of Agriculture Meets and Organizes

At the organization meeting of the State Board of Agriculture held in the offices of the Agricultural Department on July 20th, Hon. Joseph S. Frelinghuysen of Raritan was re-elected as president, and Clifford E. Snyder, of Hunterdon County, was again chosen as Vice-President, to succeed himself.

Two new Board members took up their duties at this meeting. They are Joseph Walter Miller, of Mercer County, and William I. Tomlinson, of Camden County. They succeed Henry W. Jeffers, of Plainsboro, and Fred Lippincott, of Moorestown.

Comment was made upon the distinguished character of the work of the retiring Board members by Secretary of Agriculture Duryee. Mr. Jeffers, he declared, has served the agricultural industry of the state eleven years as a member of the Board, while Mr. Lippincott has completed eight years of service to New Jersey farmers in this capacity.

New members are elected by farmer delegates to the State Agricultural Convention held in Trenton each January. Eight members compose the Board, their terms of office being four years.

Price Factors Which Co-operatives Must Consider

Supply and Demand Play Important Part

It is becoming increasingly evident that many of the difficulties which co-operatives encounter in securing maximum returns for their members are the direct result of a lack of understanding of the factors which determine price. Without such an understanding, the formulation of a price and sales policy becomes largely guesswork. Although it is frequently difficult to see clearly the relationship between the many factors, a careful study by members of boards of directors and managers will yield valuable results.

One of the most important price-making factors is the quantity of a given commodity, which is available. Usually, supply is thought of as annual production. This, however, is not accurate, for it will be found that the supply factor most nearly related to the price is the sum of the estimated or actual production for the particular year or crop period and the carry over at the beginning of the year.

Demand is an important factor, often overlooked or taken for granted. Farmers, particularly, are prone to give little thought to demand and to look on supply as the important thing. It is probable, however, that demand factors play at least an equal part with supply in determining price. The consumer may want a particular commodity, and yet not have the money with which to satisfy that want. Or there may be some other commodity which is more desired. Under such circumstances, a given quantity of a commodity will not be consumed at its usual price. The factors which determine demand are: general business conditions, the earnings of workers, the relative amount of employment, and the supply and price of those things which can be called competing commodities, that is, those which can be substituted and still satisfy the same demand. It is highly important that cooperatives understand that shipments be so regulated that the market will be supplied with the quantity that it can consume at all times during the marketing season. The proper administration of the supply in the control of the cooperative, so that shipments are not allowed to reach markets already over supplied, but are diverted to others where conditions are more favorable, will tend to increase the average price realized by the members, since few sales are made in glutted markets. At the same time it is probable that there will not be much change in the average annual price for the whole crop.

The managers of cooperatives can not afford to be without the latest, best, and most complete data available on these important phases of their marketing problems. "Rule-of-thumb" methods and "hunches" are a thing of the past in successful present-day business.

—A. V. Swarthout,

In "Agricultural Cooperation."

Kill the Weeds Now

Weeds must be annihilated without mercy even if the weather is too hot for comfort. If no weeds are permitted to go to seed in the lawn or garden, there will be fewer next year. The garden must be cultivated thoroughly and often during the hot dry weather to conserve the moisture. Cultivate after every rain and once a week during the dry weather.

Penna. State Farm Products Show Commission Ready to Start Work

The Pennsylvania Farm Products Show Commission, provided for by the 1927 General Assembly, is now ready to start work.

The Commission consists of nine members, three of which were recently designated by Governor John S. Fisher from a list of six persons recommended by the State Farm Products Show Committee.

As now constituted the Commission includes: Governor John S. Fisher; C. G. Jordan, Secretary of Agriculture, chairman; R. L. Watts, dean, School of Agriculture, Pennsylvania State College; M. S. McDowell, director of agricultural extension work, Pennsylvania State College; Raymond G. Bressler, Deputy Secretary of Agriculture; H. C. Petterolf, Pennsylvania Department of Public Instruction; H. D. Allebach, president, Interstate Milk Producers' Association; Miles Horst, secretary, Pennsylvania Potato Growers' Association and John H. Light, secretary, Pennsylvania State Grange.

The duties and powers of this Commission are: (1) To formulate plans for, conduct and manage the State Farm Products Show; (2) To lease buildings for holding the Show until such time as the Commonwealth shall acquire a permanent site; (3) To lease space to exhibitors after the Commonwealth has acquired a permanent site; (4) To use the proceeds from sub-letting or leasing space to exhibitors to pay the expense of holding the annual show; (5) To arrange for the holding of agricultural and educational meetings in connection with the annual exhibition.

Two-Thirds of Farms in Penna. Contain Less Than 100 Acres of Land

Farms ranging from 50 to 99 acres, numbering 61,438, are the most numerous in Pennsylvania, according to the Bureau of Statistics, State Department of Agriculture.

Approximately two-thirds of the farms contain less than 100 acres and are probably operated with but little hired labor, the Bureau states.

The Middle West and Far West, however, do not have a corner on big farms. There are 114 in Pennsylvania containing over 1,000 acres and eight of these have 5,000 acres or more.

The census figures reveal a tendency toward farms of smaller size. From 1920 to 1925 the number of farms containing less than 50 acres in size increased 5,300 while the number in excess of 50 acres decreased 7,100. Farms of 1,000 acres or more have steadily decreased during the past 45 years, numbering 244 in 1880, 238 in 1900, 167 in 1910, 154 in 1920 and 114 in 1925.

The 1925 Federal Census gives the following line-up of the 200,443 farms according to size: Under 3 acres, 986; 3 to 9 acres, 18,187; 10 to 19 acres, 17,199; 20 to 49 acres, 37,367; 50 to 99 acres, 61,438; 100 to 174 acres, 49,263; 175 to 259 acres, 11,602; 260 to 499 acres, 3,813; 500 to 999 acres, 480; 1,000 to 4,999 acres, 106; 5,000 acres and over, 8.

Produce Quality Milk

Quality milk brings the best price and makes satisfied customers. The main essentials are cleanliness, prompt cooling, and holding at a low temperature.

INTER-STATE MILK PRODUCERS REVIEW

Official Organ of the
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In planning your fall and winter operations for this year, bear in mind that labor conditions, general business conditions and production conditions in the dairy manufacturing regions do not warrant a great expansion in milk production. On the other hand, keep in mind that the adjustments which have been made in the Philadelphia selling plan have not been made to discourage production. The total basic milk which is now accredited to shippers bears quite a close relation to the fluid milk sales in Philadelphia and surrounding markets. That sufficient milk is required at all times, and enough in addition must be produced to take care of the table cream requirements. Each shipper's individual average should be his guide. Both shortages and over-productions in the market can be avoided if each shipper will maintain his present average every month. By this method your market can be protected, the present price maintained, and the advantages of the basic and surplus plan preserved for the welfare of the stabilized producer.

Milk production at a profit is a problem of economic interest to every producer. It is one that requires some thought and then some very definite and sustained action.

Every milk producer should look at his problem as a definite business undertaking, not just one of milking cows. In other words produce for the profit to be derived.

This involves a number of factors. The right kind of cows, the right kind of feeding, proper care and the production of a safe and sanitary product.

Profitable production does not always mean just turning cows on pasture, if you will, but turning the right kind of cows on the right kind of pasture and at the right time, plus, other recognized economic dairying practices.

In fact these are considered unimportant factors to producers who are not dairymen, to the class who just milk cows, take their milk check at the end of the month

and let it go at that. Too many producers of this type either break the market or break themselves.

It is time for every milk producer to wake up. Many have done so. Present days' records prove it. There still remains, however, a vast majority who may just be termed milkers. They are in the same class as the "border cow".

Consider dairying as a business proposition. In many cases two cows are doing the work of one. They require twice the care, twice the feed, as one good cow and then, as a rule, do not produce at a profit.

Economic dairying problems have been the results of long and careful study. The general milk producer however cannot adopt all these principles in a day—but a start is a move in the right direction. Analyze your dairy business. If you cannot do this yourself consult the leaders in the dairy industry in your community, consult your county agent and definitely plan and carry out some method toward placing your dairy on a sound business basis.

The comment most often heard among those who recently attended the third session of the Institute of Cooperation, was that of the progress which has been made during the past three years in cooperative thought in the United States.

Those who attended the Institute were given an opportunity of learning just how a large cooperative association conducts its statistical work. The use of market information as a factor in determining price was discussed by several speakers. Our own association gave an actual example of a typical country meeting. These examples show how completely the present day cooperatives are equipped to market the products of their members.

Able papers also showed how the cooperatives were giving to their members the marketing facts through meetings, their own papers and fieldmen. Surveys have shown the efficiency of this membership service.

There was presented at the Institute this year a number of papers which gave very interesting results of recent surveys made by the U. S. Department of Agriculture and others to throw light on present day marketing problems.

Papers were presented showing the relationship of price differentials between various dairy products and between markets. The Chief of the Bureau of Agricultural Economics of the U. S. Dept. of Agriculture presented a comprehensive survey of present day world markets for dairy products.

In the minds of some the outstanding feature of Dairy Week came when Dr. Clyde L. King presented for the consideration of the group a proposed code of ethics for the dairy cooperative. Nine points were given which should govern the conduct of all cooperative organizations in their business relationships. These had to do with the keeping of all agreements, treating all buyers alike, and the maintenance of proper understanding between producer, dealer and consumer.

MARKET CONDITIONS

There was some decrease in fluid milk production in the Philadelphia Milk Shed during the past month. This condition was due, in a measure, to occasional spells of hot weather in places, and to the continued lack of sufficient rainfall. Pastures in many cases have been short.

While the production for July has been less than for May and June, when the supply in the Philadelphia market was approximately 20% greater than during the same months a year ago, yet the figures show that the production of basic milk has remained in excess of the demand for fluid milk and table cream. During the month, the retail demand for these products has shown a slight

buyers will pay basic prices for 100 per cent of the established basic average, rather than 110 and 115 per cent during these respective months, at established basic prices.

The above action has been taken with a view point of establishing a continued safe market, and at an unchanged price, and it is believed that producers can so adjust their production as to produce a supply of milk for the future, adequate for the market demands, but not excessive so that the present price basis can thereby be continued.

July Market Prices

Grade B market milk, three per cent butterfat content (basic quantity average), delivered f. o. b., Philadelphia, during July is quoted at \$3.29 per hundred pounds.

Owing to market conditions the Executive Committee of the Directors of the Inter-State Milk Producers' Association has agreed with the cooperating Buyers that no increase in the Basic Average be allowed producers during August and September, 1927.

This decision has been arrived at after a careful study of market conditions, both from the production and consumption standpoint and is in conformation with statistical information as to the market in the Philadelphia Milk Shed.

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

Feeds

With the exception of corn products and the lower protein mixed feed, July feed prices are a little lower than one month ago. They are, however, somewhat above the prices that prevailed last year.

Reports from the corn belt do not indicate favorable prospects for the 1927 crop. Visible stocks also are lower than those for the past two years.

Wheat bran prices are lower than a month ago. Mixed feeds show little change in price. Mixed hay is also quoted somewhat lower.

July Butter Market

The price of butter during July has been almost stationary. From the highest to the lowest range the fluctuation has not been greater than 1 3/4 cents, and the daily range has been in fractional amounts.

Production for July has been somewhat lower than a month ago, as is the usual case, owing to the warmer weather.

Storage in the ten major markets on August first showed a total of 79,342,000 pounds as compared to 79,217,000 pounds, one year ago.

The demand at the close of the month was quiet, and inclined to be a trifle feverish.

The price of 92 score butter, New York City, solid packed on July 1st was 42 1/2 cents, in midmonth it had touched 42 cents, and closed at the end of the month at 41 cents.

The average price of 92 score solid packed butter, New York City, on which July surplus was based was computed to be 41.88 cents per pound as compared with 42.55 cents per pound one month ago.

Under this program cooperative

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN

The basic price quoted below for July, 1927, is to be paid by cooperating dealers on the average basic quantity established by each producer. For all milk bought in excess of the basic amount, the surplus prices quoted below for the month of July are to be paid.

Beginning with January, 1927, the basic quantity will be established by using the higher average basic quantity established in October, November and December of either 1925 or 1926. These quotations are based on 3% butterfat milk and a differential of 4 cents for each tenth point and 2 cents for each half tenth point up or down and are for all railroad points. (Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES

This price list is issued with the understanding it is not to be producers and that all buyers using it as a basis of payment to producers, shall in addition thereto make the following contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46 1/2 quarts) of all milk purchased from any producer at price listed herein.

(2) To the Inter-State Milk Producers' Association 2c per 100 pounds (46 1/2 quarts) of all milk bought from members of said Association.

(3) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46 1/2 quarts) of all milk bought from other producers at price listed herein.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets, and for an educational campaign advertising the food value of dairy products.

BASIC PRICE

July
F. O. B. Philadelphia
GRADE B MARKET MILK

Test per cent.	Per 100 lbs.	Price per qt.
3.1	\$3.29	7.1
3.2	3.31	7.1
3.3	3.33	7.15
3.4	3.35	7.2
3.5	3.37	7.25
3.6	3.39	7.3
3.7	3.41	7.35
3.8	3.43	7.4
3.9	3.45	7.4
4.0	3.47	7.45
4.1	3.49	7.5
4.2	3.51	7.55
4.3	3.53	7.6
4.4	3.55	7.65
4.5	3.57	7.7
4.6	3.59	7.75
4.7	3.61	7.8
4.8	3.63	7.85
4.9	3.65	7.9
5.0	3.67	7.95
5.1	3.69	8.0
5.2	3.71	8.05
5.3	3.73	8.1
5.4	3.75	8.15
5.5	3.77	8.2
5.6	3.79	8.25
5.7	3.81	8.3
5.8	3.83	8.35
5.9	3.85	8.4
6.0	3.87	8.45
6.1	3.89	8.5
6.2	3.91	8.55
6.3	3.93	8.6
6.4	3.95	8.65
6.5	3.97	8.7
6.6	3.99	8.75
6.7	4.01	8.8
6.8	4.03	8.85
6.9	4.05	8.9
7.0	4.07	8.95
7.1	4.09	9.0

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

JULY SURPLUS PRICE

F. O. B. Philadelphia
Class 1

Test per cent.	Per 100 lbs.	Per qt.
3.1	\$2.16	4.65
3.2	2.18	4.7
3.3	2.20	4.75
3.4	2.22	4.8
3.5	2.24	4.85
3.6	2.26	4.9
3.7	2.28	4.95
3.8	2.30	5.0
3.9	2.32	5.05
4.0	2.34	5.1
4.1	2.36	5.15
4.2	2.38	5.2
4.3	2.40	5.25
4.4	2.42	5.3
4.5	2.44	5.35
4.6	2.46	5.4
4.7	2.48	5.45
4.8	2.50	5.5
4.9	2.52	5.55
5.0	2.54	5.6
5.1	2.56	5.65
5.2	2.58	5.7
5.3	2.60	5.75
5.4	2.62	5.8
5.5	2.64	5.85
5.6	2.66	5.9
5.7	2.68	5.95
5.8	2.70	6.0
5.9	2.72	6.05
6.0	2.74	6.1
6.1	2.76	6.15
6.2	2.78	6.2
6.3	2.80	6.25
6.4	2.82	6.3
6.5	2.84	6.35

SURPLUS PRICES

Monthly Surplus Prices
4% at all receiving stations

July 1926	Class I	Class II
1.96	1.96	1.96
2.10	2.10	2.10
2.21	2.21	2.21
2.37	2.37	2.37
2.59	2.59	2.59
2.71	2.71	2.71
2.87	2.87	2.87
3.03	3.03	3.03
3.19	3.19	3.19
3.35	3.35	3.35
3.51	3.51	3.51
3.67	3.67	3.67
3.83	3.83	3.83
3.99	3.99	3.99
4.15	4.15	4.15
4.31	4.31	4.31
4.47	4.47	4.47
4.63	4.63	4.63
4.79	4.79	4.79
4.95	4.95	4.95
5.11	5.11	5.11
5.27	5.27	5.27
5.43	5.43	5.43
5.59	5.59	5.59
5.75	5.75	5.75
5.91	5.91	5.91
6.07	6.07	6.07
6.23	6.23	6.23
6.39	6.39	6.39
6.55	6.55	6.55
6.71	6.71	6.71
6.87	6.87	6.87
7.03	7.03	7.03
7.19	7.19	7.19
7.35	7.35	7.35
7.51	7.51	7.51
7.67	7.67	7.67
7.83	7.83	7.83
7.99	7.99	7.99
8.15	8.15	8.15
8.31	8.31	8.31
8.47	8.47	8.47
8.63	8.63	8.63
8.79	8.79	8.79
8.95	8.95	8.95
9.11	9.11	9.11
9.27	9.27	9.27
9.43	9.43	9.43
9.59	9.59	9.59
9.75	9.75	9.75
9.91	9.91	9.91
10.07	10.07	10.07
10.23	10.23	10.23
10.39	10.39	10.39
10.55	10.55	10.55
10.71	10.71	10.71
10.87	10.87	10.87
11.03	11.03	11.03
11.19	11.19	11.19
11.35	11.35	11.35
11.51	11.51	11.51
11.67	11.67	11.67
11.83	11.83	11.83
11.99	11.99	11.99
12.15	12.15	12.15
12.31	12.31	12.31
12.47	12.47	12.47
12.63	12.63	12.63
12.79	12.79	12.79
12.95	12.95	12.95
13.11	13.11	13.11
13.27	13.27	13.27
13.43	13.43	13.43
13.59	13.59	13.59
13.75	13.75	13.75
13.91	13.91	13.91
14.07	14.07	14.07
14.23	14.23	14.23
14.39	14.39	14.39
14.55	14.55	14.55
14.71	14.71	14.71
14.87	14.87	14.87
15.03	15.03	15.03
15.19	15.19	15.19
15.35	15.35	15.35
15.51	15.51	15.51
15.67	15.67	15.67
15.83	15.83	15.83
15.99	15.99	15.99
16.15	16.15	16.15
16.31	16.31	16.31
16.47	16.47	16.47
16.63	16.63	16.63
16.79	16.79	16.79
16.95	16.95	16.95
17.11	17.11	17.11
17.27	17.27	17.27
17.43	17.43	17.43
17.59	17.59	17.59
17.75	17.75	17.75
17.91	17.91	17.91
18.07	18.07	18.07
18.23	18.23	18.23
18.39	18.39	18.39
18.55	18.55	18.55
18.71	18.71	18.71
18.87	18.87	18.87
19.03	19.03	19.03
19.19	19.19	19.19
19.35	19.35	19.35
19.51	19.51	19.51
19.67	19.67	19.67
19.83	19.83	19.83
19.99	19.99	19.99
20.15	20.15	20.15
20.31	20.31	20.31
20.47	20.47	20.47
20.63	20.63	20.63
20.79	20.79	20.79
20.95	20.95	20.95
21.11	21.11	21.11
21.27	21.27	21.27
21.43	21.43	21.43
21.59	21.59	21.59
21.75	21.75	21.75
21.91	21.91	21.91
22.07	22.07	22.07
22.23	22.23	22.23
22.39	22.39	22.39
22.55	22.55	22.55
22.71	22.71	22.71
22.87	22.87	22.87
23.03	23.03	23.03
23.19	23.19	23.19
23.35	23.35	23.35
23.51	23.51	23.51
23.67	23.67	23.67
23.83	23.83	23.83
23.99	23.99	23.99
24.15	24.15	24.15
24.31	24.31	24.31

Agricultural Income for Year Slightly Lower

Gross agricultural income is estimated by the Bureau of Agricultural Economics, United States Department of Agriculture, at \$12,080,000,000 for the crop year July 1926 to June 1927, compared with \$12,670,000,000 the preceding year, a decrease of about 5 per cent, due chiefly to the decline in cotton prices. Smaller income is also estimated for feed grains, apples, and potatoes, which was only partially offset by somewhat higher returns from livestock and livestock products.

The total gross income is made up of \$9,549,000,000 computed as cash income from sales, and \$2,531,000,000, the value of food and fuel consumed on farms. The preceding year the cash income from sales was \$10,135,000,000 and the value of food and fuel consumed on farms \$2,535,000,000.

Net income, after deducting expenses, is estimated at \$2,440,000,000 last year against \$3,082,000,000 the preceding year, a decrease of about 20 per cent. Expenses of production decreased only 2 per cent while the gross income decreased about 5 per cent.

Reports to the bureau from 13,475 farm owners reporting for their own farms also show a decreased average income for 1926 compared with 1925. According to the reports from these farms, which are somewhat above the average of the United States in size and investment, average incomes decreased in all geographic divisions of the country excepting the South Central Division.

Cash income from sales last year as estimated for the country as a whole included \$3,754,000,000 for dairy and poultry products against \$3,589,000,000 the preceding year; \$2,892,000,000 for meat animals against \$2,848,000,000; \$1,511,000,000 for fruits and vegetables against \$1,686,000,000; \$1,456,000,000 for grains against \$1,594,000,000, and \$1,291,000,000 for cotton and cotton seed against \$1,749,000,000.

Out of the year's income farmers paid \$6,671,000,000, which included \$1,238,000,000 for wages to hired labor; \$2,987,000,000 operating costs; \$654,000,000 taxes on operator-owned investment; \$1,042,000,000 rent on property rented from non-operators, and \$750,000,000 interest on debts to non-operators.

The decreased earnings, says the bureau, represents a decline in the average income per farm operator available for labor, capital and management from \$922 in 1925-26 to \$853 in 1926-27. If 4 1/2 per cent interest is allowed as the return on the operator's net capital investment, there is indicated a decline in the return for the operator's labor (including family labor) and management from \$690 in 1925-26 to \$627 in 1926-27. If the operator and his family are allowed a wage equivalent to that of hired labor, these returns represent a decline in the rates earned on the farmer's own capital investment including return for management from 4.3 per cent to 2.7 per cent in 1926-27.

For the industry as a whole, the net earnings available for capital and management as percentages of all capital employed decreased from 5.2 per cent to 4.2 per cent, whereas comparable percentages earned by all corporations on their total capital investment appear to have been about 13 per cent in 1925 as computed from reports of the United States Treasury Department and available data indicate that about the same percentage was earned in 1926.

The returns from agricultural production have been earned on declining values of agricultural capital. Between January 1926 and January 1927, agricultural capital declined from \$59,712,000,000 to \$58,255,000,000, a reduction of \$1,457,000,000.

One-Half of Pennsylvania Cattle Tested for TB

One-half of all the cattle in Pennsylvania are now tested for tuberculosis. On July 1, a total of 630,000 head of the total cattle population of 1,280,000 had been given the test one or more times, according to Dr. T. E. Munce, Director, Bureau of Animal Industry, State Department of Agriculture.

Judging from the rapid rate at which cattle have been tested during the past few years, it is predicted by Bureau officials that bovine tuberculosis will be reduced to less than one-half of one per cent by the end of 1933, providing adequate funds are made available during the intervening years and the interest of the cattle owners and cooperating agencies continues.

Funds for the biennium 1927-1929 total \$2,160,000 and will provide for more than a million tuberculin tests. These tests will include the retesting of herds already given one or more tests as well as new herds.

Tuberculosis eradication work in Pennsylvania has been progressing under two plans. One is the individual herd plan under which herds scattered here and there over the State are tested. The other is the area plan by which all the herds in a township are tested at a time. On July 1, a total of 4,081 herds were fully accredited under the individual herd plan, having passed two or more clean tests. Likewise all the herds in 14 counties had been tested under the area plan, and nine of these counties were accredited.

The counties which are now regarded as "modified accredited counties," being practically free of bovine tuberculosis, include: Butler, Cameron, Clearfield, Crawford, Indiana, Jefferson, Lawrence, Mercer and McKean.

The following five counties have been completely tested but have not qualified as accredited areas: Columbia, Elk, Monroe, Potter and Union.

The desire among cattle owners for having the tuberculin test made is so great that a waiting list of 2,572 individual herds in 54 counties and all the herds in 256 townships in 45 counties was reported by the Bureau on July 1.

Start 12 Clover Strain Demonstrations in Penna.

A dozen clover strain demonstrations are now under way in the state under the direction of extension agronomists of the Pennsylvania State College. Fifteen different strains are included in the trial seedings.

Among those being tried are Italian, three sources of French seed ranging from northern to southern, Tennessee and Virginia anthracnose-resistant strains, three sources of Oregon seed, and strains from Colorado, Idaho, Michigan, Ohio, and Minnesota.

In southeastern Pennsylvania the demonstrations are located in Adams, Lancaster, York, Delaware, Lebanon, and Cumberland counties. Other seedings are in Westmoreland, Warren, Clarion, McKean, Sullivan, and Susquehanna counties.

Research agronomists are trying the different strains on the Pennsylvania State College agricultural experiment station farm also.

Demonstration plots seeded in McKean and Susquehanna counties last year will be harvested this season. Similarly planted plots in Westmoreland, Adams and Delaware counties were uniformly destroyed by adverse growing conditions so no results will be obtained from them.

Latest Methods for Killing Beetle Grubs Given in Free Bulletin

The latest methods for killing the Japanese beetle grubs in lawns and in the soil about nursery stocks is given in Bulletin 440, now being distributed by the Pennsylvania Department of Agriculture.

The bulletin was prepared at the request of State officials by Federal entomologists stationed at the Japanese beetle laboratory, Riverton, New Jersey.

Two ways are described for destroying the grubs as they work near the surface of the ground and kill the grass. The first method consists in an application of a poisonous spray solution to the ground. This method requires special machinery and is less practical on small lawns than the second method which consists of mixing arsenate of lead with the soil before reseeding the grass.

Regarding the second method the authors of the bulletin state, "Five years of experimental work, conducted at the Japanese beetle laboratory, have shown that arsenate of lead, when mixed with the upper soil layer will control grubs and worms and will not unduly influence the growth of the majority of grasses commonly used in golf greens and lawns."

"The grasses which have grown successfully in soil poisoned with arsenate of lead are creeping bent, perennial ryegrass, German mixed bent, Chewings fescue, sweet vernal grass, Kentucky blue grass and meadow fescue."

"When arsenate of lead is mixed with the soil of a lawn or golf green at the rate of 1,500 pounds to the acre (3 1/2 pounds per 100 square feet), it kills the grubs and worms. Experiments show that turf so poisoned has remained grub-proof over a period of five years."

"Experimental work covering three years shows that far from being injured by the arsenate of lead, the grasses used on lawns are actually stimulated by the presence of this material in the soil."

Bulletin 440 and Bulletin 390 which tells of the life history and habits of the Japanese beetle, can be secured free from the State Department of Agriculture at Harrisburg.

Keystone Herds Set High Milk Records

Thirty-eight Pennsylvania testing associations tested 13,785 cows during June, the monthly report of the Pennsylvania State College dairy extension service just issued shows. Of this number, 2894 cows produced 40 or more pounds of butterfat and 3615 gave more than a half ton of milk. In the 40-pound group 834 cows passed the 50-pound mark, and 1814 of the 1000-pounders gave more than 1200 pounds of milk.

Chester Valley tested the largest number of cows, 588, while Coventry association, also in Chester county, was second with 513. Cowanesque Valley in Tioga county led in the number of 40-pound cows with 175, and the Wayne association was second with 159. The Cowanesque dairymen also led in the number of heavy milkers with 177, while Allegheny was second with 167.

W. M. Hunsberger of the Middle Bucks association had the highest individual cow in milk production, a registered Holstein, which gave 2766 pounds during the month. A grade Holstein, owned by J. R. Dome of the Laurel Hill association in Bradford county, led the butterfat producers with 101.3 pounds. The highest 10-cow average in butterfat went to the Carbon-Elchig group which had 69.9 pounds.

Much Farm Land Abandoned, But Production Increases

While more than three million acres of farm land have been abandoned or put to other uses since 1889, agricultural production in Pennsylvania has continued to increase, according to the Bureau of Statistics, State Department of Agriculture. A preliminary study of abandoned and idle farm acreage has just been completed by this Bureau.

Figures based upon returns from a questionnaire on occupancy of farm houses and abandoned and idle farm acreage, as of June 1, 1927, indicate that, of the houses in the State intended to shelter families engaged in agriculture, 5.9 per cent were vacant, 85.9 per cent were occupied by families engaged in agriculture and 8.2 per cent by families not engaged in agriculture.

Acreage devoted to agriculture, in the opinion of 96 per cent of the reporters, reached the maximum in 1919, while it had reached its maximum in 1889. It is estimated that 7.8 per cent of the acreage devoted to agriculture in 1919 was abandoned by June 1, 1927, i. e., farm operations have been entirely discontinued and will probably remain so, and that an additional 9.9 per cent was idle, i. e., for some unforeseen reason it is not in use this year, but is likely to be within a year or two. Of the acreage devoted to agriculture in 1889, 17.0 per cent was estimated to be abandoned and an additional 18.4 per cent idle.

By way of comparison, the acreage of farms in Pennsylvania in 1924 was, according to the Federal Census, 7.7 per cent less than the acreage in 1919 and 16.8 per cent less than an average of the acreages reported in the censuses of 1880 and 1900. Since 1919, approximately 1,360,000 acres of farm land have been abandoned or put to other uses; since 1889, the net loss in the farm area of the State has been approximately 3 1/4 million acres. In spite of this decrease in farm acreage, the total production of wheat, corn, oats and potatoes has increased approximately 40,000,000 bushels.

Triennial Farm Census in Pennsylvania Now Under Way

The second triennial farm census in Pennsylvania is now under way in Allegheny and Blair Counties and in several first class townships in the southeastern section of the Commonwealth.

The census takers will be busy in practically all counties by September. The first triennial census was taken in the State in 1924, in accordance with an act of the 1921 General Assembly. This Act requires that the farm census shall be made by the assessors at the time of making their regular triennial assessments for county purposes.

The second census figures will be carefully compared with the first census in order to discover trends in agricultural developments.

Governor Fisher Makes Appointments to State College Board

Recent appointments to the Board of Trustees of Penn State College announced by Governor Fisher include Jesse B. Warner of Lansford for a four year's term. Reappointments include Robert W. Balderston, secretary of the Interstate Milk Producers' Association, Media, Pa.; Harry D. Brown, Williamsport, Pa.; Edgar R. Kiese, Williamsport, Pa. and Clara R. Phillips, Washington, Pa.

Three Ways of Using FLIT

1 In milk barn



2 Spray cows



3 In milk bottling plant



Rid your premises of annoying, disease-bearing flies and other insects. Get best possible milk production. Flit is harmless to man and beast—but fatal to insects. Progressive dairies in all sections are now using it.

- 1 After sundown spray Flit toward ceiling of barns, where flies usually rest. The "fog" thus formed quickly kills flies.
- 2 Spray cows themselves when they come in from pasture. Keeps away flies during milking. Spray them before going out to pasture. Gives better production.
- 3 Spray Flit at night in milk bottling plant after you are through with the work, which avoids any possibility of imparting a taste or odor to milk. Kills flies. Better sanitation.

If you have never used Flit, better get acquainted. *Be sure to get Flit—do not accept substitutes.* Send today for leaflet—"Proper Use of Flit in Dairies" and our special offer.

Introductory Offer

Dairy Division,
Stanco Distributors, Inc.
26 Broadway, New York City

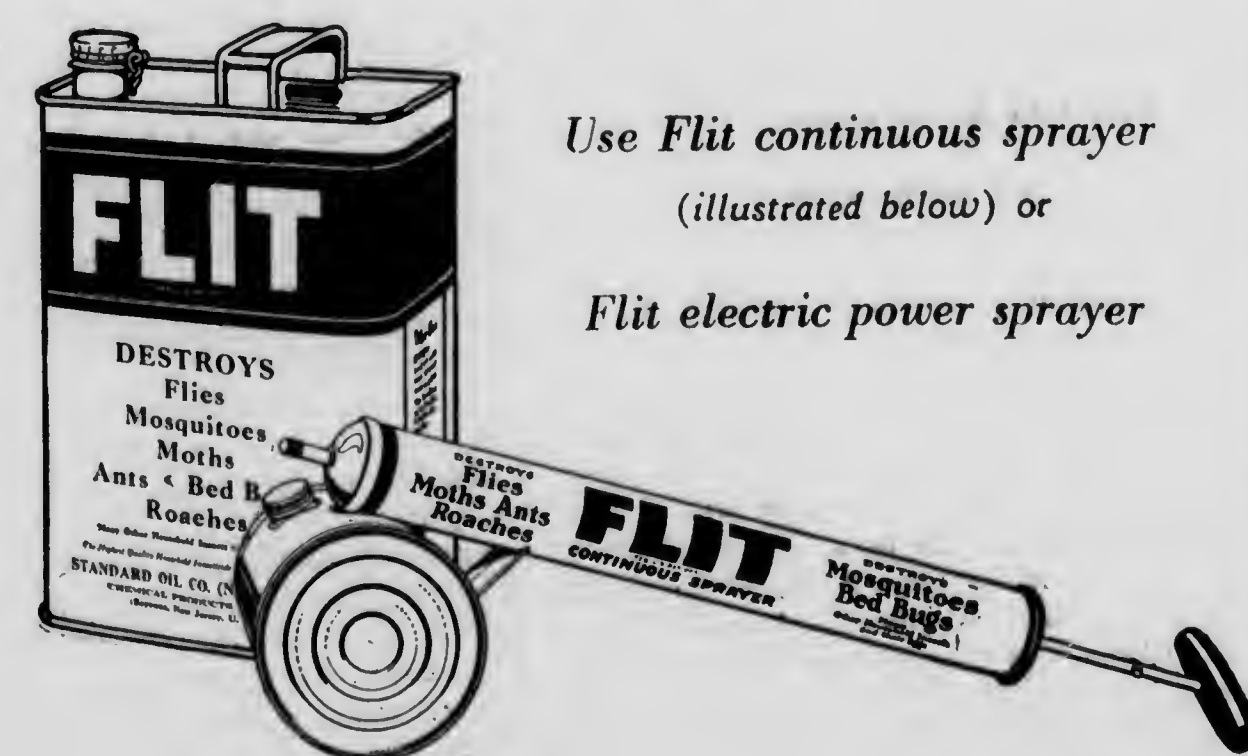
Send me "Proper Use of Flit in Dairies".
Also special introductory offer to dairies.

Name

Address

City

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NUTRITION — DIET — HEALTH

Will Your Child's Heritage Include Good Teeth?

Among the many things that we wish for our children today are good teeth, together with a well-formed dental arch. Good teeth are more closely associated with the destiny and health of our race than we realize. Teeth are essential for proper mastication of food, and sound healthy teeth are a priceless asset; while poor, ill-formed and diseased teeth are a constant menace to health and beauty.

If we are to build good teeth we must begin very early with a mother's diet, for the baby's teeth are actually forming at two and a half months of embryo life, and at birth all the first teeth are in place in the gums ready to complete their development even though they do not begin to erupt until the child is six months old.

Even the buds for the first permanent molars that do not actually appear until the child is six years old are in place at birth ready for the long, slow process of development.

When a baby is six months old all the enamel is on the first set of teeth, therefore the condition of these so called deciduous teeth depend upon the nutrition of the mother; the condition of the second teeth on the child's own diet, and his inherited reserve of lime salts.

Breast-fed babies have the decided advantage over the bottle-fed ones. For some reason the muscular work required in the former feeding has a decidedly advantageous effect upon the development of the jaws and the dental arch. A well-formed dental arch is to be desired as a narrow, poorly formed arch results in a predisposition to adenoids, enlarged tonsils, and even effects the voice tones of the individual later on.

Care of the Baby Teeth

When a child is two years of age he has his complete set of baby teeth—twenty in number.

Many a mother makes a grievous mistake by thinking that because these teeth are to be replaced by others they do not require much, if any care.

Behind the baby teeth are the buds of the permanent teeth that are gradually developing and as they develop they absorb the lime salts from the roots of the first teeth which should be kept sound for best results. Then, too, each baby tooth acts as a marker and if kept in place will do much to prevent crowded and misplaced second teeth.

Jaw Development

At two years old the twenty baby teeth occupy the entire space of one tiny jaw; this same jaw must actually grow large enough to hold the thirty-two second teeth, all of which are much larger than the first ones.

This requires a tremendous lot of lime and every growing tissue also requires exercise for proper development. The best way to furnish exercise is through mastication. If a child is taught to chew hard foods the jaws develop properly and spaces appear between all of the teeth at the age of five, allowing room for the larger second teeth which are already partly formed in the jaws. If your child's heritage is to include good teeth then you must see that he has the right diet, exercise and care; if he is to keep them the same care must continue throughout a life time.

Dolly Madison Serves Dainty Dish of Ice Cream

"Last Night," records one in Washington's official life of long ago, "I was bid by our President to the White House, and it was a most unusual affair. Mrs. Madison always entertains with grace and charm, but last night there was a sparkle in her eye that set astir an air of expectancy among her guests.

"When finally the brilliant assemblage—America's best—entered the dining room they beheld a table set with French china and English silver, laden with good things to eat, and in the centre, high on a silver platter, a large, shining dome of pink and cream.

"What is it?" I asked Mistress Dolly Madison, who was standing near me.

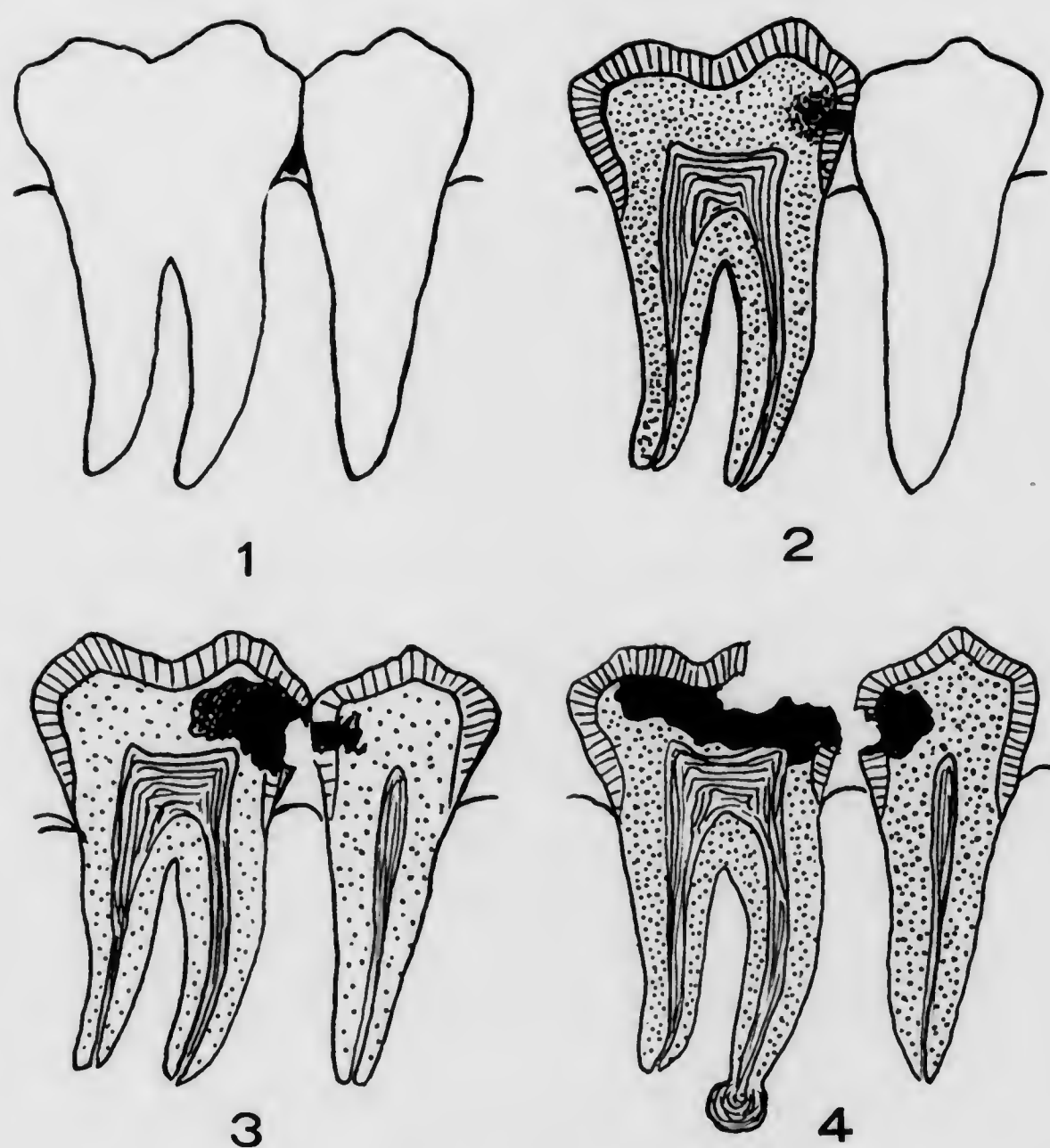
"A surprise for this occasion," she said. "It is ice cream. The cream is

from our own dairy at Montpelier, and that exquisite color and flavor is the essence of strawberries from Virginia. Is it not a tempting dish?"

"Indeed, madam," I replied, "its beauty is rivalled only by your own, while its flavor I am sure would have made more famous still Hebe's cup of Youth. May I express the hope that ladies everywhere will adopt your charming surprise as a custom?"

* * * *

And so, since the days of Dolly Madison, first ladies in every home in the land have realized that few functions, winter or summer, elaborate or simple, are complete without this delectable, wholesome food—ice cream.



A Clean Tooth Never Decays

Boys and girls, the time has come for a visit to the dentist before school begins. You can not afford to lose school time suffering with an unnecessary toothache.

The four illustrations above show you very clearly what happens when you neglect to brush your teeth and a particle of food is left in a crack to turn sour and start decay.

No. 1 shows this particle of food caught between two teeth. If the brush cannot dislodge it a piece of dental floss drawn between the teeth will do the work without danger of cracking the surface.

In No. 2, the acid formed by the decaying food has eaten through the enamel and is ready to make trouble. If the dentist sees the tooth now he can clean out the cavity and fill it without hurting you.

No. 3 shows the decay increasing and not content with damage in one tooth has spread to its neighbor so that now both must be attended to. The trouble

has not yet reached the nerve—which you see running down into the root of the tooth—and the tooth can still be saved.

The tooth in No. 4 is in a bad way, indeed. The top has crumbled off and it looks as if the nerve has probably died. Nature does not like any dead tissue and little pus germs are likely to gather at the end of the dead nerve thus forming an abscess. Then you are in for real trouble as you may have to have the tooth pulled.

Wouldn't it have been very much better to have asked Dr. Jones to fill that little cavity in No. 2 while it was still too small to hurt?

In these days, you are learning to build up strong, well-nourished bodies. To do this you must chew your food well and you cannot chew with faulty teeth. It should be a matter of pride with you to have clean, strong teeth which will last you as long as you need them. For not only do they contribute to your good health but they add materially to your good looks.

"The Charm That Charms"

A Story With a Moral

Sure as fragrant as a flower is a wholesome woman's charm. And it has the same old power in the town or on the farm: If a proper healthful diet aids this loveliness to thrive. Every farmer's wife should try it and so keep her charm alive.

Toward the end of a hot and trying July day I stopped my Ford in front of a friendly looking farm house to ask which of two roads led to the city.

I might have called to the woman who sat rocking on the porch, but I had driven far and the porch looked cool and hospitable, so did the woman.

As I sat down beside her, greeted by the serene smile of welcome in her eyes, some of the day's burden was lifted from my tired mind. I realized the wholesome charm that may emanate from a plain woman who is healthy and well groomed.

"You're a pleasant sight," I said. "I've chatted with several women in these parts today and every one has given me evidence of the wear and tear of farm life on the farmer's wife. You are different."

My hostess laughed. "There's a reason," she said. "I'll tell you, if you like." She hitched her chair nearer to mine and continued stringing her beans for dinner.

"I was born and raised on a farm—a farmer's daughter, a farmer's wife—now the mother of farmers, always so busy living I forgot one thing—my personal appearance. Two years ago I took stock of myself and realized that I was a sight."

This discovery came upon me at a very inconvenient time—just before dinner when I was rushing as usual—I hate to keep the men waiting. In passing the side-board mirror I saw my reflection. The shock was almost too much for me. I stood for a second wondering if I always looked like that when my family gathered around the table. I was wearing a stringy mustard colored dress which added a yellowish tinge to my already sallow skin, and wisps of straggling hair stuck out drearily to left and right of my face. One couldn't truthfully say I wore my hair in any particular style—I just wore it—that was all!

"Calling to my daughter to put the dinner on the table I fled upstairs, changed to a fresh dress—better suited to my complexion—brushed my hair into a semblance of softness, and went down rather sheepishly to greet my family.

"Whew! having a party today, Mother?" my husband asked. That completed my humiliation. If a clean dress and neat hair suggested a 'party' to my husband, what an eyesore I must have been to him for years.

"From that day I took myself in hand. I argued that a farmer enjoys looking at an attractive wife as much as does any other man—maybe more. Therefore, a country woman has as much incentive to look her best as her city sisters.

"A dress of becoming color is as quickly made as an unbecoming one, so I selected proper shades for my complexion.

"The complexion itself I improved by healthful diet. I followed the eight health rules," she laughed, "less fried meats and dumplings, more fruits, milk and vegetables without which beautifiers

(Continued on page 9)

Milk Also Byrds

Favorite Beverage

"He chatted with his hosts, and drank a glass of milk before retiring."

This is the Associated Press report of what Commander Byrd thought most essential when he was rescued from his good ship America, landed in the sea 200 yards off the Normandy shore.

Lindbergh probably less tired than Byrd, wanted milk and a bath before retiring; Byrd wanted just a glass of milk.

What they drank is an unfailing indication of what they are. It tells the reason for their ability to stand the test, endure the strain, and win the race.

There is no doubt as to the importance of the diet factor in the successes of many men; less doubt now than before the real values in milk and milk products were analysed and classified. It takes, however, a Lindbergh and a Byrd to make the emphatic demonstration of these facts for the guidance of all who would emulate their stamina, their manhood, and their success.

"The Charm That Charms"

(Continued from page 8)

a complexion soon degenerates. I made a point of resting now and then through the day, and I conscientiously drank four glasses of water daily. Well, I'll never be a beauty, but I have achieved a healthy skin and less forlorn appearance. Any farm woman can do it. It isn't a feat!

"I've always loved that phrase, 'Her children shall rise up and call her blessed,' and I don't want my appearance to be a stumbling block to mine."

My new friend walked with me to the road, when I reluctantly took my leave. "You are a philosopher," I said, as I drove away.

"Oh, it isn't philosophy," she called after me, "it's just common sense."

To Make Whitewash

Weatherproof whitewash can be made by slacking 62 pounds of quicklime in 12 gallons of hot water. Dissolve two pounds of common table salt and one pound of zinc sulphate in two gallons of boiling water and add to the lime mixture. Then add two gallons of skim milk and stir thoroughly.

If a jar of chocolate or fruit syrup is kept cool in the ice-box, milk drinks can be made in a jiffy.

Philadelphia Inter-State Dairy Council

General Offices

Boyertown Building, Philadelphia

A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value to nutrition.

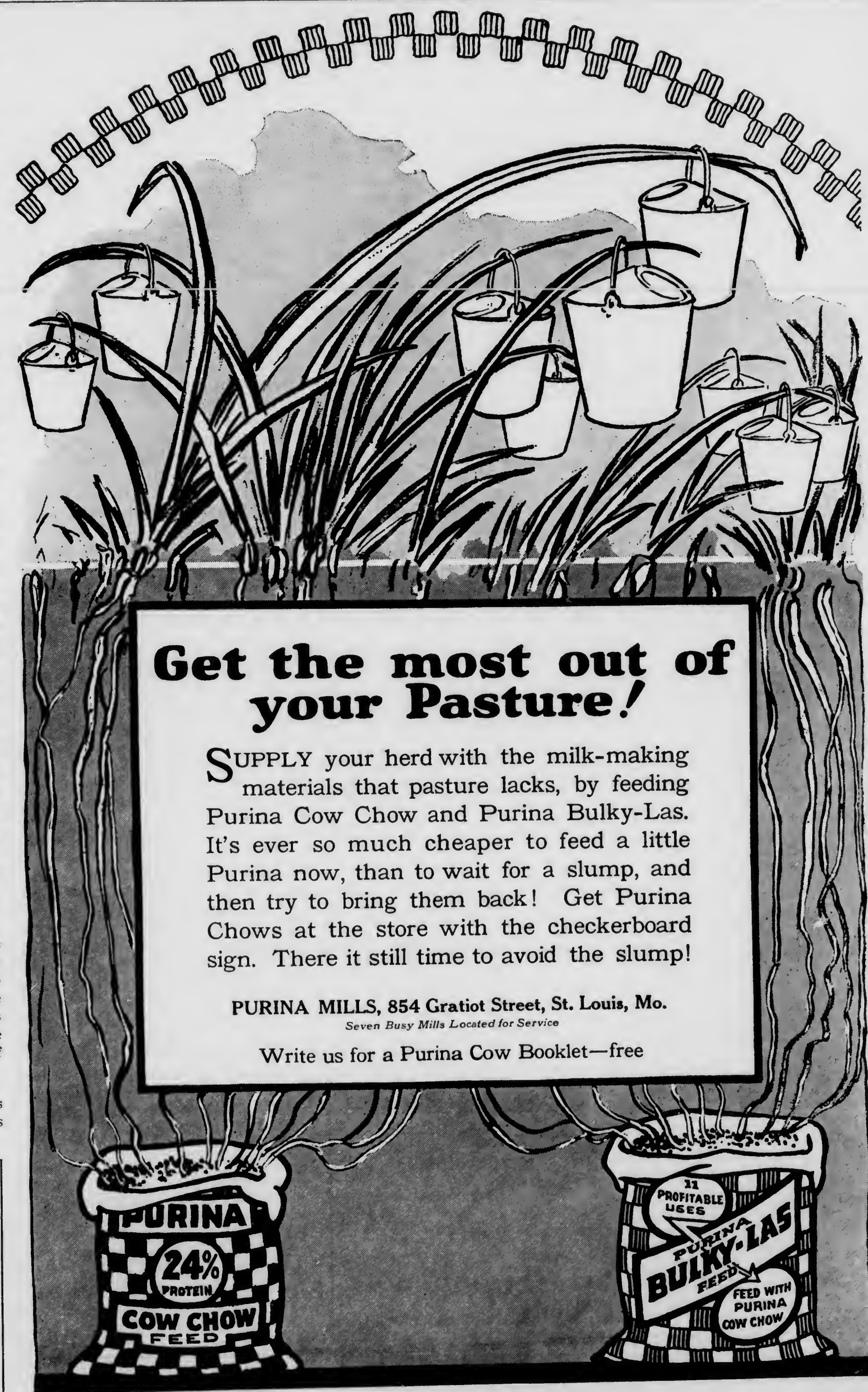
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780,000 High Grade Baby Chicks Produced Under New Plan

Approximately 780,000 improved standardized baby chicks were produced in Pennsylvania this year under the accredited hatchery plan of the State Department of Agriculture.

This plan, which was started three years ago, is based upon the selection of breeding birds for type and egg production. In addition, blood samples have been tested for bacillary white diarrhea from about 75 per cent of the birds passed.

Work was started in 1924 with 3,000 birds and has steadily increased until 50,000 were inspected last season, of which 38,000 were passed. During the past year, 85 flocks and 24 hatcheries co-operated with the Department in this work.

Buyers report that chicks produced under this plan are uniform in quality and that losses from disease have been much reduced. Hatchery owners, on the other hand, have experienced larger sales,

better prices and fewer complaints.

Regulations for the coming season have been adopted by the Department, effective July 1. In addition to modifications based upon past experience, certain changes in grade terms have been made to conform with a uniform plan agreed upon by the eastern states. Complete information can be secured by writing to the Bureau of Markets, State Department of Agriculture, Harrisburg.

FACTS About Manure Spreaders

McCormick-Deering Spreaders are profit making equipment on thousands of farms where labor-economy and soil fertility are accepted as essentials to production because five exclusive patented features—1. Patented Wide-spread Spiral. 2. Patented Auto-steer Front Truck. 3. Patented Double-ratchet DRIVE. 4. Patented Spring Chain Tightener. 5. Patented Drive Control—insures that they will spread manure well and have great durability.



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Built in full accordance with the American Society of Mechanical Engineers' Code and meets every requirement of the states of New York, New Jersey, Delaware, Pennsylvania and Maryland. A great time and labor saver. Helps to get that higher price for milk. Write for complete specifications and rock bottom price.

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American Institute of Co-operation

(Continued from page 1)

presented by members of the Quality Control Department of the Philadelphia Inter-State Dairy Council.

The program was carried out in complete detail and was highly appreciated by the audience. This is the first time that such a complete program of "country work" has been so fully presented at any meeting of the Institute.

Second Day's Session

The second day's session was given over to marketing programs and included addresses by John Brandt, president Land O'Lakes Creameries Inc., who spoke on "Problems of Butter Co-operation" and A. J. McGuire, of the same federation whose topic was "Quality Improvement Work". "The Standardization of Dairy Products" was the subject of an address by H. R. Leonard, Manager, Twin City Milk Producers' Association and A. J. Tracy, Esq., Attorney for the Pure Milk Association, Cincinnati, Ohio, whose topic was "Retail Distribution in a Large City".

At the afternoon session M. Mortensen, of the Iowa State College, addressed the meeting on "Problems of Administration in Creamery and Cheese Factories". "Cooperative Marketing in Our Educational Systems" was the subject of an address by Andrew W. McKay, Department of Agriculture, Washington, D. C.

Third Day's Session

A most interesting report of a membership survey was presented by J. W. Jones, Department of Agricultural Economics, Washington, D. C., on "Membership Problems of Four Large Fluid Milk Cooperatives". In this report Mr. Jones compared the actual results obtained by investigations conducted in the field, actual milk producers as to the value of their organizations, its efficiency as a marketing or bargaining organization and the many details of the various organization's functions. (We hope to print this report in full in the Milk Producers' Review at an early date, Editor.)

"Getting Facts for Management" was the subject of an address by C. E. Sniffen, Statistician, Dairymen's League Cooperative Association, New York, while C. E. Hough, General Manager, Connecticut Milk Producers' Association, spoke of "Cooperative Organization Management as a Career."

At the afternoon meeting addresses were made by H. E. Erdman, Prof. of Rural Institutions and Agricultural Economics, University of California, on the "Distribution of Control in the Cooperative" while E. H. Thompson, of the Federal Intermediate Credit Bank, Springfield, Mass., talked on the subject of "Financing the Dairy Cooperative."

Fourth Day's Session

This day's session included the following topics.

"Price Differences Between Markets", by J. T. Horner, Professor of Agricultural Economics, Michigan Agricultural College, Lansing, Mich.

"Price Differentials Between Products", by T. G. Stitts, Marketing Specialist, University of Minnesota.

"A Cooperative and Production Control" by I. W. Heaps, secretary, Maryland State Dairymen's Association and "Statistical Correlation of Production to Sales" by J. O. Eastlack, of the same organization.

At the afternoon meeting addresses were made by John D. Miller, president National Cooperative Milk Producers' Federation, on "Ten Years of the

National Milk Producers' Federation". B. F. Beach, Assistant Secretary, Michigan Milk Producers' Association, spoke on "What the Fluid Milk Cooperative Can and Can Not Do". (Note—A part of this address is printed in this issue of the Milk Producers' Review, Editor.)

Dr. Clyde L. King, Wharton School, University of Pennsylvania, made an inspiring address on "How Dairy Farmers Have Helped Themselves."

Fifth Day's Session

The fifth day's session, and the closing one for dairy week brought out some highly interesting addresses.

Henry W. Woolman, secretary of the Supplee-Wills-Jones Milk Company, Philadelphia, Pa., made an address on "How Dairy Cooperatives Have Helped Distributors Conduct Their Business More Efficiently."

Dr. Clyde L. King, Wharton School, University of Pennsylvania, Philadelphia, presented "A Code of Ethics for the Dairy Cooperative."

These he tabulated under the following classifications:

1. The Dairy Cooperative will sell the milk produced by its members at the best market price on a long time basis.
2. As between the buyers and sellers in the market, whether producers, dealers, or consumers, the interests in common are of greater importance than the differences.
3. Differences will be thrashed out in conference and dirty linen will not be washed in public and a conference will be held at any time at the request of either party. A good salesman will not create sales resistance.
4. Bargains will be kept. A man's word is as good as his bond.
5. Prices will be the same to all buyers under substantially similar market conditions.
6. There will be equal treatment to producers under similar market conditions not only as to price but as to butterfat tests, weights and measures.
7. The cooperatives will keep first emphasis ever on quality.
8. All advertising and publicity will be kept on an educational rather than on a propaganda basis.
9. The best interests of the industry as a whole will be furthered, and the interests of the consumer and the dealer will be given fair consideration.

C. W. Larson, Chief, Bureau of Dairying, Department of Agriculture, Washington, D. C., made an informing address on "The Dairy Cooperative and a National Dairy Improvement Program" while Lloyd S. Tenny, Chief, Bureau of Agricultural Economics, Department of Agriculture, Washington, D. C., outlined the "Dairy Products in the World's Markets."

Associated Meetings

Associated with the general meetings in connection with the Institute, opportunity was presented for special meetings of affiliated groups actively engaged in one of the various organization activities.

There was a three day session of the Editors of the various cooperatively-owned agricultural trade papers, at which the various phases of publishing, editorial and general business programs of the various publication media were discussed. Many helpful features of the work on the whole were brought out.

During these same weeks the Statisticians and the Attorneys having to do with the problems of cooperative associations held sessions for the discussion of problems incident to their particular field of work.

Total Ice Cream Consumption Increases; Per Capita Consumption Declines

Ice cream consumption in the United States last year was nearly 2,000,000 gallons more than in 1925, but the consumption per person fell off slightly from 2.60 gallons in 1925 to 2.77 gallons in 1926, according to estimates by the Bureau of Agricultural Economics, United States Department of Agriculture.

Total production of ice cream last year, including ice cream made in homes, drug stores, and other places is placed at 324,665,000 gallons against 322,729,000 gallons in 1925. Per capita consumption was smaller last year on account of cooler weather. Six months of 1926 the weather for the United States as a whole was cooler than in 1925. It was warmer for four months, and about normal for two months.

Ice cream production has increased remarkably in recent years. The estimated production in 1910 was only 95,450,000 gallons, but by 1920 production had reached 260,000,000 gallons, and last year was 324,665,000 gallons, an increase in 16 years of 240 per cent. Although ice cream manufacture is a small branch of the dairy industry, utilizing only about 3.8 per cent of the milk produced in the United States, the industry employs more than 50,000 persons and pays out in salaries more than \$75,000,000 a year.

Resistant Wheat Strains

May Reduce Loose Smut

Loose smut of wheat causes an estimated loss in the United States of more than 10,000,000 bushels annually, according to V. F. Tapke, pathologist of the United States Department of Agriculture. It is possible, he says, to control the disease by treating the seed with hot water, but the treatment is difficult and frequently reduces the stand and yield. Efforts are being made, therefore, to develop strains of the important varieties that will be resistant to or immune from infection.

Since 1922 many varieties and strains of wheat have been tested at Rosslyn, Va., and Ithaca, N. Y., for resistance to loose smut. All of the important eastern wheats and a few of the leading western wheats have been included in the tests. Resistant or immune strains have been found in such varieties as Blackhall, Dawson, Fulcaster, Fultz, Hussar, Leap, Penquite, Preston, Purplestrow, Ridit, Shepherd, Silversheaf, and Trumbull.

Fultz and Fulcaster, two widely grown varieties, have generally been reported to be susceptible to loose smut, but the pure-line selections used in these experiments proved to be highly resistant. The occurrence of resistant and otherwise desirable strains in these two important varieties gives encouragement to the hope of reducing the heavy annual loss caused by loose smut of wheat.

Mary's Little Lamb

Mary had a little lamb,
Her fleece, you know,
And everywhere that Mary went
The duffer had to go.
He followed her to pale pink teas,
In truly lamb-like style;
He was as docile as you please,
For quite a little while.
But after marriage, seems the gent
Assumed another tone;
Then everywhere that Mary went
She had to go alone.

—Answers" (London).



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If Larro didn't have real quality to start with—and if every bag of Larro were not like every other bag in formula and feeding results—we couldn't offer the sweeping guarantee we put behind it.

But this guarantee accompanies every sack of Larro we produce, and has stood back of every sack produced for fifteen years.

The two bags you get from your dealer and feed to one cow under our trial offer do not contain a special feed prepared for this purpose. They are identical in quality and composition with the other millions of sacks we manufacture every year. And if Larro, fed under these conditions, does not give satisfaction, your dealer is authorized to return the purchase price.

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Philadelphia Inter-State Dairy Council

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What a Dairy Cooperative Can Do and Cannot Do

(Continued from page 1)

price limitations in the market. It is as necessary to know when the price is too low as when it is too high.

To a certain degree, when the individual competition between producers is removed the law of supply and demand is somewhat affected. With the individual competition present during the time of increased demand the price will usually increase. The organization must be well enough posted to quickly recognize not only opportunities of price increase, but increases that would naturally take place if it were not for the organization.

2. The Milk Cooperative must recognize that a working margin of surplus milk is absolutely necessary in the market, and in some manner or another this must be provided. It is not sold as fluid milk, therefore it cannot receive the fluid milk price. Either the price on that sold as fluid milk must be low enough to allow for a margin of surplus, or the price must be higher on fluid milk, and only include that actually sold as such and not manufactured.

Inasmuch as it is recognized that something of a working margin of surplus is necessary, a plan may be used like the following: Fluid milk price to cover all milk which is bottled plus all that is put into cream, plus five percent additional to both of these combined. In this case there is no surplus milk unless the milk distributor actually has milk to spare for manufacturing purposes. The price paid for the milk takes into consideration the manner in which the milk is used.

There are other cases where the fluid milk price refers only to that which is actually sold as fluid milk. It does not include the milk which is bottled and is returned unsold, neither does it include that which goes into cream, or, in fact, nothing in addition to the milk which is actually sold as fluid milk. In this case, of course, the price on the fluid milk must necessarily be higher with a different price on the remainder.

3. The organization cannot keep the milk shed from expanding. If the association secures the price to which it feels it is entitled it will naturally attract more milk, and as much as we would like to hold the market for ourselves, it seems impossible to do it at all times, but rather must recognize in some way or another it will expand from time to time. The organization, however, can influence this expansion and should endeavor to allow such expansion to take place only as the demands in the market increase to warrant it.

4. The organization cannot sell the surplus milk produced by the seasonal fluctuations at the fluid milk price at all times. In other words the organization cannot sell manufacturing milk for as much as fluid milk. If the prices on the two of them are the same there probably is something wrong because the price on the fluid milk should be such that it pays the farmer more than he can get for manufacturing milk. The price on fluid milk should be higher because of the increased cost of producing it. Fluid milk must be produced during the whole year in order to meet the market demands. It must be produced at times of heavy cost of production as well as during the period of low cost. The present demands or requirements of the farmers that are producing milk for metropolitan areas adds to the cost, therefore, there should be a differ-

ential in price and there must be in order to attract milk to the fluid milk territory.

5. The Milk Cooperative at the present time can influence the world market prices comparatively little. For some time to come the organizations will have very little to say pertaining to the world market prices. Although a local price may be increased somewhat when selling a manufactured product, generally speaking, the power of the organization in dictating prices on the product which has a market as wide as the world is very limited.

6. The producers' organization, I am sorry to say, cannot keep all of its members satisfied at all times. The make-up of the individuals and their business is such that this is an impossibility and is not to be expected.

7. It is impossible for the organization to keep the entire membership informed if they will not read or attend meetings. Much of the success of the organization, however, depends upon its ability to successfully cope with this problem.

8. Lastly, the organization cannot succeed without faith on the part of its members. There must be fellowship as well as leadership. There are those in every community who for some reason or other desire to see the Farmers' Cooperative effort defeated, and if the members listen and believe the statements made by those people and have more faith in those that are endeavoring to defeat organization than their chosen leaders they are headed for failure.

These apparently are fairly well prescribed limitations for a Milk Cooperative. However, we must recognize the fact that past experience has proven that what proves to be a limitation in one market with one organization might not be a limitation in some other market. On the other hand, what can be done in one organization cannot always be accomplished by another in an entirely different market under different conditions. The fundamental principles will, we believe, hold true, but it still remains for each organization to become acquainted with their own conditions, compare them with the conditions surrounding other fluid milk markets, and after making such a comparison, and after carefully analyzing their own particular problems from every angle they should be able to progress with a minimum amount of trouble and reach a fairly high degree of success.

*Reprinted in part from an address by R. P. Beach, at the American Institute of Cooperation, Chicago, Ill.

10,000 Fewer Tenant Farmers Than in 1920

There were approximately 10,307 fewer tenant farmers in Pennsylvania in 1925 than in 1920, according to the Bureau of Statistics, State Department of Agriculture. The percentage of tenancy in the State was 17.4 in 1925, as compared to 38.6 per cent for the U. S. Tenants decreased in number in California, Georgia, South Carolina, Alabama and in nearly all parts of the section east of the Mississippi and north of the Ohio and Potomac Rivers, and increased in many parts of Texas, Oklahoma, Kansas, Louisiana and Missouri. Decreases in the percentage of tenancy from 1920 to 1925 were most conspicuous in New England and in the Pacific Coast States.

COW TESTING ASSOCIATIONS

Montgomery County Cow Testing Association

R. G. WALTZ and F. E. MARTIN.

During the month of June 25 herds were on test, having 393 cows in milk and 37 cows dry. Twelve unprofitable cows were disposed of. Fifty-eight cows produced over 40 pounds and ten over 50 pounds of fat. Eighty-one cows produced over 1000 pounds of milk while 36 produced more than 1200 pounds.

Highest Herd Average Milk Production

Owner	Breed	Cows in herd	Average Lbs. Milk
Schultz, Est., Levi	Hol.	14	1023
Rothenberger, L.	"	7	927
Allebach, H. D.	"	14	868
Landis, W. H.	"	19	861

Herds Averaging Over a Pound of Butterfat a Day

Owner	Breed	Cows in herd	Ave. Lbs. Butterfat
Schultz, Est., Levi	Hol.	14	31.7
Allebach, H. D.	"	14	32.5
Landis, W. H.	"	19	32.0
Idlewild Farm	Mix.	18	31.6
Camp Discharge	Grn.	14	30.4

Four daughters sired by bulls of the Holstein association were among the 10 highest producers during the month and are as follows:

Owner	Name of Cow	Breed	Age	Lbs. Milk	% Fat	Lbs. Butterfat
Allebach, H. D.	No. 19	R. H.	3 1/2	1623	3.7	60.1
Allebach, H. D.	No. 17	R. H.	4 1/2	1560	3.7	57.7
Allebach, H. D.	No. 20	R. H.	4	1497	3.7	55.4
Rothenberger, A. K.	Annie	P. H.	2	1380	3.7	51.1

Fifty-eight cows in this association produced more than 40 pounds of butterfat for the month. The leaders in this group, Wm. H. Landis with four cows; O. M. Woodward, with two cows; H. D. Allebach, with four cows; W. C. F. Randolph, with one cow; A. K. Rothenberger, with five cows; Mrs. H. Bieler, with two cows; Willow Creek Farm, with four cows; A. H. Hunsicker, with three cows; Ursinus College, with three; Levi Schultz Est., with three; Idlewild Farm, with five; C. Wm. Haywood, with three; Wood & Son, with four; Camp Discharge, with three; A. L. Bailey, with two; Harry Bechtel, with two; Warren Schultz, with three; C. E. Wismer, with two and Harvey Murphy, Hartman & Weinberg and L. Rothenberger, with one cow each.

Northern York County Cow Testing Association

WILLIAM T. SCHAEFER, Tester

The records of the northern York County Cow Testing Association for the month of June, show that 22 herds were tested with 243 cows in milk and 31 dry. The number of cows producing over 40 pounds of fat was 57 while 17 produced over 50 pounds. Sixty-three cows produced over 1000 pounds of milk, while 29 produced over 1200 pounds.

Ten highest producing cows:

Owner	Name of Cow	Breed	Lbs. Milk	% Fat	Lbs. Fat
E. S. Gross	Opal	Gr. G.	1503	5.0	75.2
Norman Rishel	Sylvia	R. H.	2142	3.5	75.0
John S. Brandt	Peg	Gr. G.	1392	5.0	69.6
Norman Rishel	Mildred	R. H.	2037	3.4	69.3
J. A. Poorbaugh	Carrie	Gr. G.	1101	5.5	60.6
E. S. Gross	Spot	Gr. G.	1227	4.8	58.9
Wm. F. Dummer	Mabelle	Gr. G.	1230	4.7	57.8
C. H. Gross	Pearl	Gr. G.	1824	3.1	56.5
Frank Krall	Jewel	R. H.	1701	3.3	56.1
J. A. Poorbaugh	Larry	Gr. G.	1023	5.4	55.2

Twenty-one producers having a total of 82 cows were on the honor roll having produced more than 30 pounds of fat during the month.

3407 Cows Produce High Butter Yields

Forty pounds of butterfat or more was the record made by 3407 cows in Pennsylvania cow testing associations during May. Of this group, 1353 produced more than fifty pounds of butterfat.

During the same period, 4255 animals passed the half-ton mark in milk production, while 2386 gave better than 1200 pounds of the lacted fluid. Forty-three associations reported 15,958 cows on test and 166 "boarder" cows were sold.

Members of the Central Pennsylvania Guernsey Breeders' association had the highest number of cows on test, 634. The Chester Valley association of Chester county was next with 560. Wayne county led in the number of 40-pound butterfat producers with 192.

56 Cow Testing Groups in State

Two new cow testing associations started operations in Pennsylvania early this month. They are located in Adams and Bradford counties. During June two new associations began to function in Franklin county, and one each was formed in Huntingdon and Tioga.

There are now 56 associations busy at work separating the boarders from the profitable cows in Keystone herds. Every association completing a year's work so far in 1927 has reorganized.

Summer Dairy Suggestions

To maintain a good milk flow during the fall months cows must be well fed during the summer.

Green crops such as oats and peas, millet, and corn should be provided.

Start extra feeding (green feed or grain or both) as soon as pastures begin to get short.

Replacing cows condemned for T.B. with fall freshening cows will help maintain a good fall and winter milk flow.

"My cows always keep in good condition"

"no udder trouble"

"never off their feed"



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Gentlemen:

I have used the open formula feeds mixed by Amco Feed Mixing Service for two years and found I could produce more milk than from any other feed I have ever fed. My cows always keep in good condition, no udder trouble, and never off their feed.

I can recommend this open formula feed to any dairyman that wants to produce milk and will say they will have more cow at the end of their milking period than from any other feed.

Yours very truly,

(Signed) S. J. RHODES

FOR August and September pasture conditions, Amco recommends **AMCO 20% DAIRY**. It is the purpose of Amco Feed Mixing Service to mix feeds for the special conditions at each season of the year. In August and September conditions are trying to cows and pasture is dry. Cows need a good feed and one that is palatable to keep them up.

Cows must be so fed that they will not lose flesh on pasture because the period of the best prices for milk is coming on. Cows kept in condition now will yield a profit in two ways a little later. They will give more milk, if well fed now, and that milk will be worth more money.

AMCO 20% DAIRY has enough protein to go with late summer and early fall pasture and green feed. The corn gluten feed and meal, the cottonseed meal, and oil meal furnish the necessary variety and quality of protein; the bran and malt grains give bulk; the hominy, corn meal, and molasses furnish energy and make the feed palatable. Cows make the best use of minerals on pasture and in the sun. **AMCO 20% DAIRY** has bone meal, ground limestone, and salt in the proper proportion. The formula is on every tag and you can see for yourself that the ingredients are in the right proportions as recommended by the best feeders.

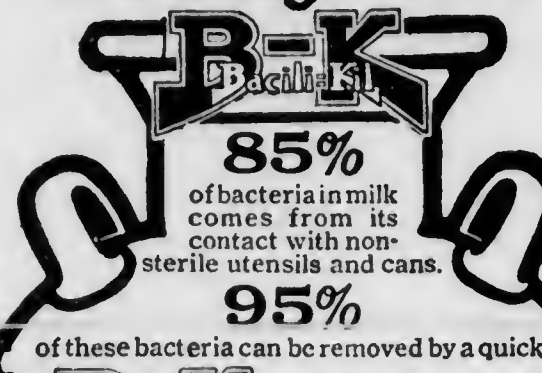
Get acquainted with Amco Feed Mixing Service and provide yourself with **AMCO 20% DAIRY** for August and September. Call up the Amco Agent in your town or write us and we will establish one. The price of **AMCO 20% DAIRY** is right. You always know exactly what you are getting for your money.

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85% of bacteria in milk comes from its contact with non-sterile utensils and cans. 95% of these bacteria can be removed by a quick B-K Rinse.

It is now definitely known that cans, buckets, strainers, coolers, separators, and other utensils or equipment with which the milk comes in direct contact, are the greatest source of bacterial contamination. Furthermore, cans sterilized at the factory become soiled again through exposure, so that by the time the farmer is ready to use them, they are infected. The only safe plan is to sterilize all cans and utensils just before using, at the farm, with a B-K Rinse. Tests prove it kills 95% of the bacteria. A B-K Rinse of your utensils just before use will eliminate 95% of the bacteria.

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Just add water
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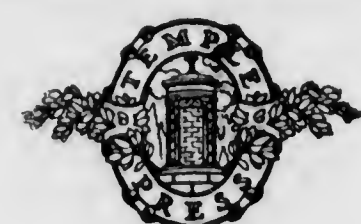
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Cleaner and Better Milk
Easier to keep them clean, make them feel more comfortable and keep dirt out of the milk pail. CLIPPING improves the health of CATTLE, HORSES, MULES, etc. Use a GILLETTE PORTABLE ELECTRIC CLIPPING MACHINE. Also furnished with GROOMING ATTACHMENTS for cleaning. Operates on the light circuit furnished by any Electric Light & Power Co. or by any make of Farm Lighting Plant. Price list free on request. GILLETTE CLIPPING MACHINE CO. 125 West 31st St., Dept. 2 New York, N. Y.

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E. F. SCHLICHTER CO.

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Every Farm Home Can Have Bathroom by Installing Efficient Septic Tank

What woman, who has enjoyed the comforts of her modern plumbing in her home, would willingly go back to a house lacking such conveniences?

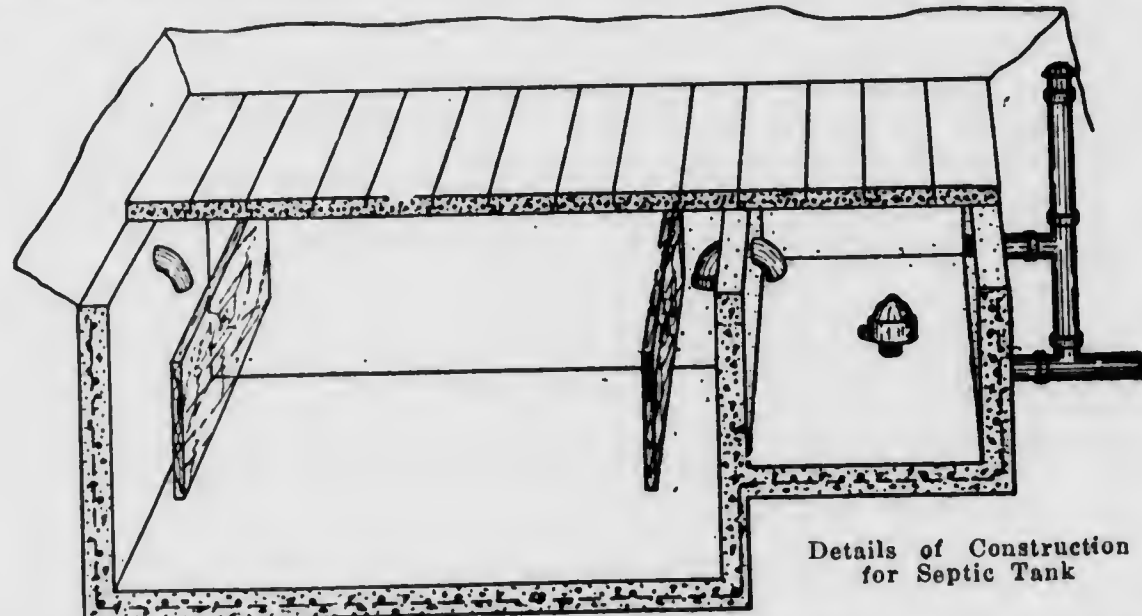
Not one in a hundred. Nor is it necessary, for any home, regardless of its location, can have the same sanitary conveniences formerly thought possible only in city homes.

Hot and cold running water and well-equipped bathrooms have become as much of a necessity in farm homes as they have in city homes. The reason

other bacteria, which work best in contact with air, do this work. The liquid finally is discharged from the distributing system practically harmless.

When it is considered that more than 85 communicable diseases are directly traceable to untreated sewage, the need for such treatment is apparent.

Any local contractor can build a septic tank and guarantee its operation. The size of tanks vary with the size of the family, the smallest practical size being one for a family of five persons. Usually they are built of concrete, which



Details of Construction for Septic Tank

has been the installation of a septic tank which safely and efficiently disposes of household wastes.

In such an installation, shown in the drawing, the wastes are piped to the tank which is located underground at a suitable distance from the house. The septic tank itself, contrary to usual belief does not purify the sewage. Instead, it merely breaks up the solids into a liquid. Certain bacteria, which work best in darkness, do this work. The liquid then emerges into a tile distributing system where any objectionable contents are destroyed. Certain

makes a permanent installation requiring the minimum of attention.

The comfort of the indoor bathroom, the labor-saving running water in the home, and the assured safety to health, make the septic tank a well worth-while investment. Any state health department will gladly give information to help a home owner install an efficient system. In addition, the editor of this newspaper will, upon request, give information as to where working drawings and complete information about concrete septic tanks may be obtained free of cost.

Report of the Quality Control Department of the Philadelphia Inter-State Dairy Council

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of June, 1927.

No. Inspections Made... 2,466
No. Sediment Tests... 2,444
No. Miles Traveled... 18,824
No. Temp. Permits issued up to June 30th, 1927... 22,995
No. Perin. Permits issued up to June 30th, 1927... 9,554
During the month 62 dairies were discontinued from selling for failure to comply with the regulations. Forty-one were reinstated before the close of the month.

To date 75,639 farm inspections have been made.

Take Care of Calves

Calves on pasture should be visited frequently, and if feed gets short they should receive grain or some supplemental feed. A check in growth always is expensive because it dwarfs the animal and delays the time that the heifers should come into milk.

The wise dairyman will know whether he is keeping cows or whether the cows are keeping him.

Inter-State Milk Producers' Association

Incorporated

Boyetown Building, Philadelphia, Pa.

Representing over 21,000 Dairy Farmers in the Philadelphia Milk Shed

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Big Increase in Milk Production Last Year

The quantity of whole milk produced in the United States last year increased four billion pounds over 1925, according to estimates by the United States Department of Agriculture. Most of the increase was consumed as fluid milk in households, and used in the manufacture of butter, and ice cream.

The department places the quantity of whole milk used in 1926 as 120,769,487,000 pounds compared with 116,505,395,000 pounds in 1925. The quantity of this production used in the manufacturing of creamery butter was 30,487,086,000 pounds of milk compared with 28,592,046,000 pounds the preceding year; condensed and evaporated milk 4,333,760,000 pounds compared with 4,394,645,000 pounds, and ice cream 4,464,144,000 pounds compared with 4,437,524,000 pounds.

The quantity of milk used for household purposes is estimated at 56,417,000,000 pounds compared with 54,325,776,000 pounds in 1925. The increase, however, has been due entirely to the increase used by the city population, the per capita consumption being 55.3 gallons, as compared with 54.75 gallons in 1925.

Of the quantity of dairy products manufactured, the production of creamery butter was 1,451,766,000 compared with 1,331,526,000 pounds the preceding year.

Cheese production is placed at 427,416,000 pounds compared with 447,514,000 pounds the preceding year; condensed and evaporated milk 1,733,504,000 pounds compared with 1,757,858,000 pounds; powdered milk 10,768,000 pounds compared with 8,931,000 pounds; powdered cream 331,000 pounds compared with 339,000 pounds; malted milk 20,673,000 pounds compared with 18,050,000 pounds; canned sterilized milk 1,286,000 pounds compared with 1,576,000 pounds, and ice cream 324,665,000 gallons compared with 322,729,000 gallons.

It is estimated that 3,941,600,000 pounds of whole milk was fed to calves last year, compared with 4,047,105,000 pounds in 1925, and there was wasted some 3,622,487,000 pounds compared with 3,495,162,000 pounds in 1925.

Approximately 47 per cent of the total quantity of whole milk used last year was consumed as milk for household purposes; 25 per cent was manufactured into creamery butter; 11 per cent into farm butter, and smaller percentages for the other products named.

A Mystery for

Sherlock Holmes

The purchasing power of the workman's dollar is at present about \$1.38.

The purchasing power of the farmer's dollar is about 83 cents.

The workman is largely organized. The farmer is mostly unorganized.

"What do you make of it, Watson?"

100-Real Dairy Cows--100 On Hand at All Times



Tuberculin tested. Guernseys, Jerseys and Holsteins from accredited herds. Priced to sell. Carload lots a specialty.

JACOB ZLOTKIN
Phone 330, FREEHOLD, N. J.
"The Man Who Sells Good Cows"

Poultry Wire—Special Cash Sale
2 in. Mesh—1 ft. roll, \$1.10; 1 1/2 ft. \$1.75; 2 ft., \$1.95; 3 ft., \$2.75; 4 ft., \$3.65; 5 ft., \$4.50; 6 ft., \$5.20.

1 in. Mesh—1 ft. roll, \$2.65; 1 1/2 ft., \$3.90; 2 ft., \$4.90; 3 ft., \$6.65; 4 ft., \$8.95; 5 ft., \$10.95; 6 ft., \$12.95.

Galvanized after weaving, 150 ft. rolls.

Satterthwaite's Seed Store
16 N. Warren St., Trenton, N. J. Phone 8378

Report of the Field and Testing Department Inter-State Milk Producers' Association

The following statistics show the aggregate operations of all the Inter-State Milk Producers' Association field men in connection with testing, weighing and general membership work, for the month of June, 1927.

No. Tests Made 6765
No. Plants Investigated... 86
No. Membership Cards... 271
No. New Members
Signed 86
No. Cows Signed 627
No. Transfers Made 36
No. Meetings Attended. 5
No. Attending Meetings. 390

The Abused Cow

A reader who has lived with the cows sends the following in their behalf:

I live on the crops of the meadow and field

And turn them to gold for the farmers' welfare.

Good health for my body will add to the yield

And ask him to give me the kindest of care.

A mother's caress to my young I bestow
After labor and pain so patiently borne.

They soon upon other rough nourishment grow

And I am a mother to humans in turn.

My young if well nourished will throw off the germ
Of disease which blights us in this latter day.

When housed for protection the owner will learn

That a care for our growth and health will repay.

So give us the freedom of sunshine and air,

The farmer's best friend cannot ask a less boon

To send us diseased to the slaughter-pen there

Is a loss you should learn to rectify soon.

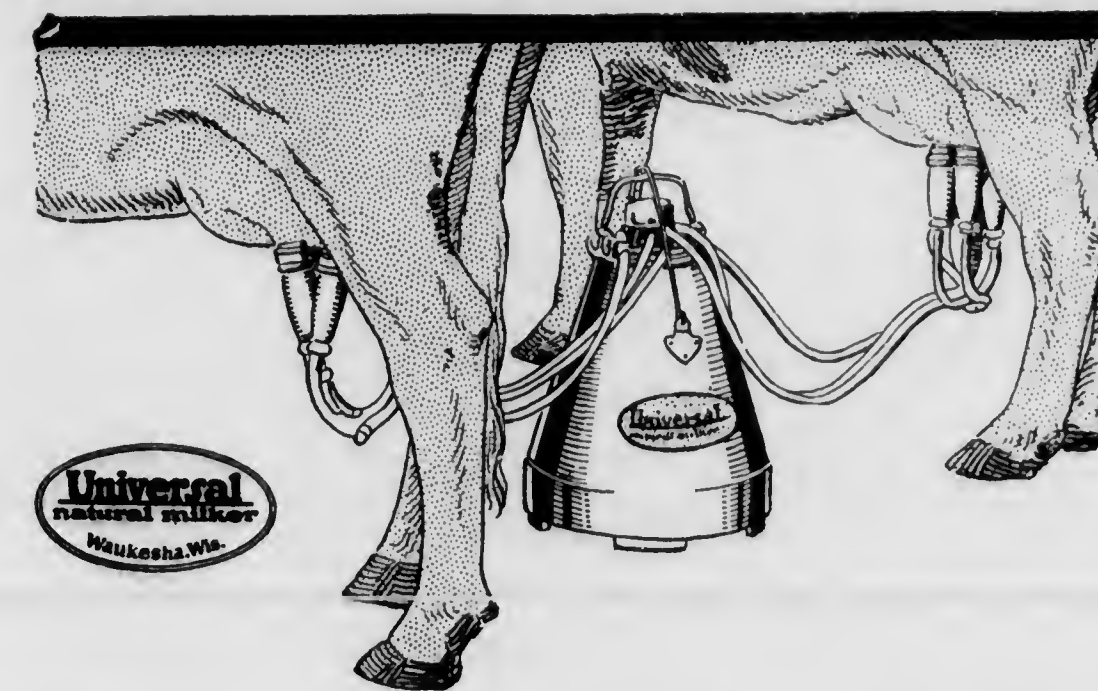
Keystone State Growers Million Clean Chicks

Over a million chicks are being grown under a definite system of sanitation in Pennsylvania this year, according to H. D. Munroe, head of poultry extension work at the Pennsylvania State College. Thirty-six counties are represented by about seven hundred growers.

Westmoreland county leads in number of growers, having almost two hundred enrolled and over one hundred thousand and chicks grown under the clean plan. York county, at the last official report, had 137 growers enrolled and 112,000 chicks being grown under the system.

The first concern of a state or nation is to insure an adequate food supply for all the people; adequate for constantly increasing numbers demanding constantly higher standards, produced from a fairly constant and finally limited area.—A. R. Mann.

Some weed seeds can live as long as twenty-five years under favorable conditions.



The result of eleven years experience!

More than 35,000 Universal Natural Milkers have been sold since the first one was put in service eleven years ago, and of this number 98% are still in daily use.

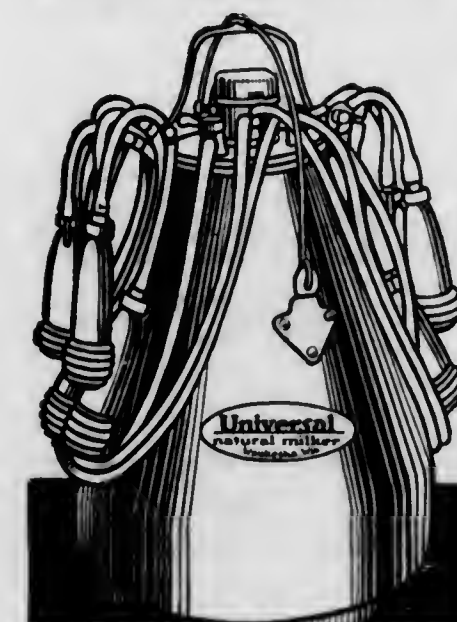
The success of the Universal has been due chiefly to the fact that it was basically correct in principle and design from the very first! It has always combined low-vacuum suction with the gentle massaging of the teat. It duplicates as nearly as is mechanically possible, the actual milking action of the calf. That is why we call it "the natural milker."

More than 85% of all the certified milk distributed in such cities as Chicago, Madison, and Milwaukee, is milked by Universal Milkers. Many outstanding national show herds and some 30 Federal and State Institutions also use Universal Milkers.

Write for free copy of our catalog which describes and illustrates Universal Milkers in detail.

The Universal Milking Machine Company

Dept. IM Waukesha, Wis.
Syracuse, N. Y.



For healthier, happier bulls!
For safer, surer breeding!



DR. SPENCER'S BULL TAMER

Thousands in use. No harsh feature; eat, drink, pasture and breed just the same. First all purpose control. 30 days' approval. Let us send you all facts.

THE SPENCER BROTHERS CO.
SAVONA, N. Y.



Gets ALL the Dirt

More MONEY for YOUR MILK

Write today for descriptive literature and particulars of how Dr. Clark's PURITY Milk Strainers help you get Grade "A" test and more money for your milk.

It is the only Strainer made that's guaranteed to strain 100% clean. Our 10 Day Trial Test enables you to prove it at our risk—your money back if it fails to remove ALL the dirt. Thousands in use—two sizes 10 qt. and 15 qt. Sold by dealers everywhere. (9)

PURITY STAMPING COMPANY
Dept. F5 Battle Creek, Michigan

DR. CLARK'S Purity MILK STRAINER

High Grade Dairy Cows

in HIGHTSTOWN, N. J.

We handle all kinds of cattle
HOLSTEINS — GUERNSEYS — JERSEYS
A Specialty

All cows tuberculin tested and sold subject to a 60 or 90 day retest and fully guaranteed in every respect. Free delivery any distance.

B. ZAITZ & SON
202 Mercer Street

Hightstown, N. J.

SITUATION WANTED—Dairy chemist and specialist, 38, married, American with 14 years experience in food and dairy products, plant and laboratory management, production of casein, milk sugar, albumen, etc., desires scientific position of responsibility. References, publications and photo supplied.

C. L. B.,
c/o Milk Producers Review,
Boyetown Bldg., Phila., Pa.

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STATIONARY — AUTO — MARINE

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Kennedy Utility Saw

Will cross-cut, rip, plane, groove and tongue plough, mire, level bore, and rabbit, tenon mortise joint make mortising, etc.

J. M. KENNEDY, 113 N. 7th St., Phila., Pa.



Some of the noted purebred Jerseys kept at Biltmore Farms, estate of the late George Vanderbilt, at Biltmore, N. C. The management writes, "We consider the De Laval essential wherever the purest and best milk is produced and we take particular pride in having standardized on De Laval Milkers."



Left: These five cows are typical of the high-producing Holsteins at the famous Serradella Farm, Oscoda, Mich., where the De Laval Milker has proven highly successful. Each has produced 30 lbs. or more of butter in seven days; their records running from 30.23 lbs. to 41 lbs., made three times by Eco Sylv Belle Pietje, on the extreme left.

Right: This truck delivers the milk produced by the De Laval milked purebred Guernseys at Mara Alta Dairy Farms, Smithville, Ohio. The Mara Alta Guernsey herd is one of the finest in the Central West.



Why So Many Owners of Purebred Cows and Producers of Clean Milk Use the

De Laval Milker

ON hundreds of farms where valuable herds of purebred cows are kept, the De Laval Milker is used exclusively to insure better milking. Experience has proven to the owners and managers of these herds that the De Laval helps keep teats and udders in better condition and milks with far greater regularity and gentleness than the average hand milker is capable of. A few of these prominent herds are illustrated.

The De Laval Milker is also acclaimed by users as a great aid in the production of more and cleaner milk. Hundreds of dairymen making Grade A and Certified milk regard it as an assurance of regular premium money. Its combination of sanitary features, found in no other method of milking, makes for greatly lowered bacteria counts and cleaner milk in every way.

For detailed information on the De Laval Milker write to the office listed below which is nearest to you. A post card will bring a De Laval representative, who will be glad to go over your milking problems with you. No obligation, of course.

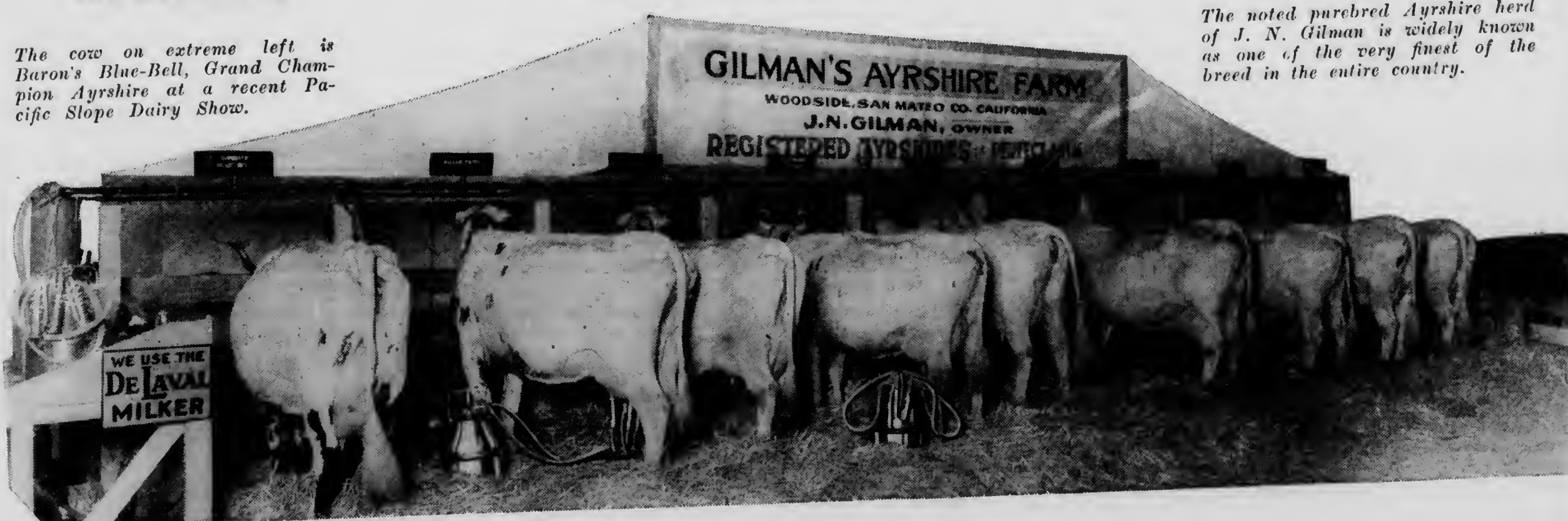
The De Laval Separator Company

NEW YORK
165 Broadway

CHICAGO
600 Jackson Blvd.

SAN FRANCISCO
61 Beale Street

The cow on extreme left is Baron's Blue-Bell, Grand Champion Ayrshire at a recent Pacific Slope Dairy Show.



The noted purebred Ayrshire herd of J. N. Gilman is widely known as one of the very finest of the breed in the entire country.

INTER-STATE Milk Producers

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

Volume VIII

West Chester, Pa., and Philadelphia, Pa., September, 1927

Number 5

Inter-State Directors Hold Their Second Field Meeting

DELAWARE AND MARYLAND TERRITORY VISITED

Following its previously outlined program, to familiarize its directors with actual production conditions in various sections of the Philadelphia Milk Shed, the second meeting of the directors in the field was held on August 25th and 26th.

This trip covered the Delaware Maryland Peninsula, and was in direct contrast with the territory visited two months ago, the southern and southwestern sections of Pennsylvania.

From these inspection trips, with which was combined the regular bi-monthly meeting of the Board of Directors, an opportunity was given those who were on the trip to fully familiarize themselves with the different farming conditions as well as the milk production programs throughout these territories, all of which were shippers of milk for Philadelphia and other cities in the Philadelphia Milk Shed.

The trip was made by automobile. Some twenty cars enabled the directors, officers and field representatives to inspect the territory, farms and receiving stations along the route.

With the exception of the distant directors in Delaware and Maryland the party mobilized at Wilmington, Delaware, from which point a start was made at 7:30 A. M., Standard Time.

The first stop was made at the Alfalfa Drying Plant, being preceded by the Arthur J. Mason System. This plant which is but a few miles below Wilmington, Delaware, will be in operation in about six weeks. At this point a brief address was made by Dr. Clyde J. King, Wharton School, University of Pennsylvania. "The new plant," he said, "is located on land owned by the city of New Castle, Delaware. It embraces about 700 acres of land, on which will be grown alfalfa and other forage crops which will be dried by the plant."

Dr. Keefer, of the Mason System further outlines some of the proposed drying programs of the plant. "Rye oats and wheat will also be dried by this plant. To insure a high protein content in the hay these grains will be cut before heading. In addition to the higher protein value the plan will permit

of rotation of rye, oats and soy beans from the same land in one season. Corn fodder drying is another of the products it is proposed to dry. In addition to the high protein feed obtained by the Mason System there is an important added feature—as by the drying process all weed seeds in the hay when cut are sterilized by the heat and thus become unfit for reproduction."

Leaving this plant the route then led over the du Pont Highway, through

Why the Philadelphia Selling Plan Has Been Modified

H. D. ALLEBACH
President Inter-State Milk Producers Association

The first duty of a cooperative marketing association such as the Inter-State Milk Producers' Association is to appreciate the possibility and realize the limitations of the market, and with this knowledge govern the production and distribution of the product to the end that all producers in the district shall participate in the benefits of the market to the greatest extent.

It is also the duty of the officers of a cooperative to place before their mem-

bers in operation six full years previous to the recent modification. During these years our producers had almost unanimously changed their methods of dairying so that practically all were year round dairymen. This had resulted in a most desirable market condition, and the production of milk throughout the year was fairly closely in line with demand. With this shift toward increased production during the fall months, the spring and summer sur-

pluses were largely decreased. So even, in fact, was the production, one month with another, that scarcely ten per cent of the year's milk was sold at surplus prices, and the highest production of May and June was not more than fifteen per cent greater than production in the fall months. These facts have been commented upon far and wide and really stamp the Philadelphia Selling Plan as one of the outstanding successes in the cooperative field.

Having secured for their members a substantial increase in price, which became effective just preceding the basic period last year, your officers thought it advisable at that time to take every precautionary measure which would help to protect that price. Having in mind what had happened in other markets, under similar circumstances, and remembering how nearly an over-production of basic milk had occurred in the fall of 1923, and

again in 1924, in this market, they felt it necessary to limit each shipper's monthly sales of basic milk to the amount that he had averaged in the fall of 1925. This change commended itself at once to the vast majority of our shippers, especially those who had stabilized their dairy business into a definite and prominent all-the-year-round part of their farm operations. To them was given by this arrangement not only the increased returns from this higher price, but also a price advantage at this higher level over producers with less regular averages, not on a yearly basis as formerly, but over such period of time as their production performance and continued favorable market conditions would warrant.

With ample information so the members can intelligently plan their individual operations so as to best fit in with the marketing program. The marketing policies must be based on known facts of present conditions, blended with the history of previous similar situations and skillfully wrought into plans for the future so that the important work of marketing a valuable perishable product such as milk may go on with the least disturbance, avoiding the need of stimulating production in periods of shortage and restraining production in periods of surplus. We know full well that any important change in plans results in disturbances in the business of the producer and a consequent loss of money.

The basic and surplus plan had been

Townsend, Smyrna and to Brenford, Delaware, where a brief stop was made at the farm of E. H. Donovan, a director of the association. After visiting the dairy barn the cattle being in the field, an inspection was made of Mr. Donovan's tomato patch, some four acres, which indicated a high yield.

The next stop was made at the farm of W. E. Thompson, president of the Nassau Local of the Inter-State Milk Producers' Association. "The Nassau Local," Mr. Thompson said, "is now in its fourth year. It began shipping milk to the Nassau Grade A plant of the Supplee-Wills-Jones Milk Co., with three cans of milk, now its shipments are approximately 200 cans."

"For two years now we have estab-

(Continued on page 4)



1—Guernsey Bull, on farm of W. E. Thompson, Nassau, Del.
2—Kent County 4H Calf Club, at Dairy Rally on farm of E. H. Pennington, near Kennedyville, Md., showing Holstein Cows and Calves.
3—Visiting Group at Hurlock Plant of Harbison Dairies, Hurlock, Md.
4—Inspecting the Tomato Crop of Director E. H. Donovan, Brenford, Del.
5—Kent County 4H Calf Club, at the Dairy Rally, on the farm of E. R. Pennington, Kennedyville, Md., showing Guernsey Cows and Calves.

(Continued on page 3)

Some Observations on a Survey of Membership Problems of Four Large Fluid Milk Cooperatives

J. W. JONES, Division of Cooperative Marketing, U. S. Department of Agriculture

This study is one of a series in membership relations which the Division of Cooperative Marketing is making in cooperation with some of the State Colleges of Agriculture located in the territory served by the Association's studied.

Membership problems are among the most difficult problems confronting cooperative associations. Some have claimed that the difficulties or failures of cooperatives can be charged to the membership's failure to support the organization locally and intelligently with volume of business or quality of products desired. I take the part of the member however, and so contend that the membership of cooperative associations has often given greater loyalty to their organization than its management deserved, that it has often shown wonderful ability to stand punishment in the form of mistakes or lack of consideration on the part of its management, and that when membership fails to give loyalty and intelligent support the management is in fault for not giving good service or the information that will enable the membership to understand the problems and the real situation so well that it can give intelligent loyalty and support in meeting the problems before the organization.

As a matter of fact the management can for a time get away with poor service in the beginning, for the membership is usually charitable to mistakes. It can get away with it later on for a short time if it takes the trouble to efficiently mold opinion. The thinking, or opinions, if you please, of the membership is therefore the important thing, for opinions right or wrong, determine action. Thinking and opinions of the membership is based on information or misinformation from some source or other, and in the absence of information from the management the member is not to be blamed if he thinks in a way objectionable to the management and detrimental to his organization. Sometimes the opposition puts out 'misinformation which it is difficult to overcome. But even so, the best way to overcome propaganda is by counter-propaganda based on facts and information that will stand the test of time because it is true and can stand long inspection.

On this premise these membership studies are conducted by means of personal interviews with members of the organizations studied and with non-members residing in the same territory. We are interested in learning what the members and non-members really think about these cooperative associations, their hopes for their accomplishments, their disappointments, their criticisms, their objections to the management or methods of operations, and their conceptions of the possibilities and limitations in the cooperative marketing of milk. The information secured from these studies should be of some value in formulating educational programs by field service departments and possibly for extension work in cooperative marketing.

Of the four fluid milk associations studied each has a different type of set-up and perform different functions in the marketing of milk. One is a bar-

gaining association and the other three carry the marketing process one or more steps further. Three make deductions for capital purposes and use certificates of indebtedness due in five years bearing interest at the legal rate. These three have gone through various forms before assuming the form of organization under which they now operate. Each of the organizations is the dominant group in its own milk shed and markets most of the fluid milk sold in its market.

The results of this study might be presented in different ways; a comparative study of results found in the four associations might be of interest to some. But because these results will be published later, and because comparisons here might be invidious, and because I have been informed by the Program Committee that this is Management Day of the Dairy Week, I have chosen to discuss the study in its relation to management and to the educational activities of the organizations and to the Agricultural Extension program in cooperative marketing, as revealed in the tabulation of about 750 schedules.

It is easily possible for the management of an association so absorbed in the details of operation and the problems inherent in its own job that it loses sight of the membership's point of view and the necessity of supplying the members with adequate information regarding the problems and the affairs of the organization. Sometimes under these conditions the field service and editorial staff is left with little knowledge of the organization and its operations or is forbidden to give out much of what it does possess.

The schedules used in the study of these four associations were adjusted to local conditions, about a score of questions were used in all the schedules. Among these were such questions as:—

What did you expect the organization to accomplish?

Has it accomplished this?

If not, why not?

What, if anything, is your criticism of the organization?

What advantages have you that non-members do not have?

What advantages, if any, have non-members that you do not have?

What mistakes do you think the association has made?

From what source do you get most information about the association?

—and several others. You will notice by the form of questions that we were not attempting to teach or suggest, but to find out what was in the members' mind sufficiently well that he could recall it on short notice.

Let us analyze the answers to some of these questions. One of the first questions "What did you expect the organization to accomplish?" gave the following answers:—

382 answered "better price,"

184 "better marketing conditions."

Now I wonder which of those answers you believe is the better one? 58 gave "better price" as a secondary answer and I like those fellows better than if they had put it first. Only 35 gave "better marketing conditions" as a secondary answer.

Now cooperative marketing is aimed at securing better prices of course, but I believe it would be easier for the management of a cooperative to fulfill the expectations of members looking for an improvement in marketing methods, than those whose minds were primarily on price. One of my reasons for saying this is found in the results of the next question "Has it accomplished this?" Here we had 442 "yes", 103 "no" and 129 "partly". All the noes of two associations were found in the price group. Now prices of milk are higher than they were when any of these associations were organized—or higher than they were five years ago. But after all price is a relative term and farms know it and so use it. Milk at \$3.00 per cwt. is low in price if feeds are proportionally still higher. More will be said about price further on, but I would suggest that associations having a high percentage of members thinking in terms of price altogether would do well to have the house organ and the other educational agencies refresh the minds of the members as to the improvements in marketing and services which the new plan was achieving in being equitable, economical and generally more satisfactory.

We then induced the member to think of the services of his association by asking two questions "What advantages have you that non-members do not have?" and "What advantages, if any, do non-members have that you do not have?" You will notice by the form of questions by letting the member see that we assumed there were advantages in belonging to the association and that there might be no advantages peculiar to non-members and these questions were intended to see what was the mental content at the time on these subjects. In other words it was believed that the answers to these two questions taken together would reveal the quality and effectiveness of the field service or informational departments. Two hundred forty-two of these members said they had no advantage over the non-members. One hundred two of these were in one association where about the same rules and expenses are imposed on members and non-members alike. Eighty of them were in another which has done comparatively little educational and field service work among the membership and in which some changes in policy have recently been inaugurated before the membership was educated to accept them. One hundred eighty-eight mentioned "a sure market" as the first advantage they had over the non-member, while twenty-six gave this as a secondary advantage. Sixty-six gave "sure pay" as the primary advantage and fifty-one mentioned it as second advantage. Protection in weights and tests was mentioned first as an advantage by sixty-three and twelve mentioned this second.

Only forty-two mentioned "a better price" first as an advantage over non-members and only eighteen suggested it for second place. This is natural, for non-members usually get as much for their milk as members and in some cases more. Members with their mind primarily on price therefore are less likely to appreciate the services of their organization.

In answer to the question "What advantages, if any, have non-members that you do not have?" three hundred forty-eight answered "None". One hundred fifty-five answered "they get more money" and eighty-nine said "They have no expenses or dues", probably having in mind that they get a higher net price. Sixty-six said "they can do as they please", having in mind no doubt the obligations imposed on members by the contract.

Considerable discussion might be devoted to the answers to these two questions and the conditions revealed therein if time permitted. They seem to me to go to the heart of the membership problem of all cooperatives in one or two ways. Does the maintenance of the organization in its present form or under present policies place the membership at material disadvantage in comparison with non-members? If so, how many of these disadvantages could be removed by a change in form on our policies? Members cannot be expected to support indefinitely an organization that puts them at too great a disadvantage with non-members. For this reason I am very fond of saying that management should have interests identical with the membership and not deceive itself because of pet ideas or personal interests and maximum service at minimum expense should be the only aim. Or on the other hand: How many of these advantages or disadvantages are only fancies on the part of the member and due to an improper understanding of the services of the organization? How many of them would vanish with complete information which an educational program could furnish? These are questions that organizations must candidly face if they are to have an enduring membership.

For the purpose of finding out the members' complaints if he had any, two questions were carried in all the schedules:—"What if anything is your criticism of the organization?" and "What mistakes do you think the association has made?" Four hundred fourteen said they had no criticism. I think that is a remarkable showing for the membership. Only one association had less than half the members interviewed so answering. There were few of the criticisms that were common to all four of the organizations, but I'm convinced by the nature of the criticisms suggested that most of them could be removed by giving full information to the members. In fact, lack of information was one of the more numerous answers.

When asked regarding mistakes of the associations two hundred seventy-four answered "none" and two hundred eleven said "I don't know", so you see less than half registered complaints there. Some of these said "none", or no more than could be expected of an organization so situated." Taking together the mistakes and criticisms that were suggested—many things called mistakes by the members were plainly criticisms—they

(Continued on page 12)

Why Philada. Selling Plan Has Been Modified

(Continued from page 1)

The basic and surplus plan as practiced before 1926 had been a very profitable instrument to our producers. It placed the proper emphasis on fall production and protected the stable organized producers against sharp price declines during the surplus season. In other markets it had to be modified from time to time because it placed too much emphasis on fall production and not enough on regular production. This fact was also beginning to become apparent in the Philadelphia market.

A tendency was developing toward the production of fall milk in excess of demand and not enough for the demand at other seasons. Our individual farm records show that many of our producers were actually shipping more milk in October, November and December than they could maintain during the other months of the year. It was this fact, plus the danger of attracting marginal dairymen into the market, that prompted the plan of continuing the 1925 averages when the 1926 price increase became effective.

Notwithstanding appeals from the officers to produce an average amount each month, the actual performances of our farmers as a result of continuing to the 1925 averages during the fall of 1926 were considerably different from those anticipated. Very many shippers failed to produce as much milk as they were entitled to, at the basic price. Just what these shippers had in mind it is difficult to say, although probably they felt it useless to produce winter milk, even at the higher price, when they were assured of being able to sell their next spring and summer production at basic price, provided they did not exceed their 1925 average. This was contrary to expectations and public announcements of the officers, when it was decided to continue the use of 1925 averages. There was no thought at that time of taking any steps to reduce basic production. The only object was to set up enough restriction to prevent a big over-production which might take away in sixty or ninety days the price increase effective September 16th. These results, however, were sufficient to substantially reduce the production of milk during these months, even below that maintained in 1925, and in January of this year the total production of milk by farms selling on the Inter-State plan, was nine per cent below that of January 1926. Thus it is apparent that our shippers failed quite seriously to maintain their fall production.

Our shippers should now arrange to avoid repetition of allowing their fall production to decrease as in 1926, for such practices always bring about big summer surpluses. From a point in January this year 9% below that of a year ago, production piled up until in May it was more than 21% greater than May 1926, and continued during June 19% higher than the previous June. Figures are even more striking for July. There is every indication that this higher production has continued through August. Good pastures account for some of this increase but not all. In addition to this unusual change in practice, cool and rainy weather during the surplus season has tended to hold down bottled milk sales and has

been decidedly unfavorable for ice cream consumption, the main outlet for surplus milk. General business and labor conditions also lack the snap and vigor of recent years.

These facts, taken together, have made the market very sensitive, and at times it has been difficult to maintain the favorable price which has prevailed for the past year. In fact, the minor adjustments which have eliminated the ten per cent additional basic milk in July and August, and the 15% in September, have been more than warranted by market conditions and will, in the end, profit our producers far more through stabilizing the market and maintaining the present basic price than would a few pounds additional basic milk which these features of the plan would have returned had they stood unmodified. Our producers have really had the advantage since the first of the year of all that this feature of the plan originally provided. In being allowed the higher of the '25 or '26 averages, the majority of shippers have received substantial advantage right through the surplus season.

Moreover, reports for May, June, July and August, filed with the Association by the buyers of a large percentage of the milk, establish clearly the necessity of eliminating, as announced, the respective per cents of additional basic milk. Records show our producers have received basic price for all milk which the dealers have been able to sell in the bottle or as table cream and the insistence that the additional per cents be paid for during the summer months would have placed such a burden on the buyers as might readily lead to a break in our price, certainly a result that everyone wishes to avoid. The main object of these additional per cents has always been to encourage our shippers to prepare for the production of their fall averages. Not only our own market conditions as shown above, but the dairy situation over the entire country points to the desirability of thinking well before planning to increase milk production over what has been maintained in the past. Butter in storage is now greater than at this time last year. Moreover, the production of butter, cheese and other manufactured dairy products, has increased rapidly since April 1st, and it now begins to appear that the total production of 1927 will be substantially above that of any year since 1924.

Indications are that production costs during the coming winter months may average slightly higher than during the winter of 1926-1927. Feed prices continue slightly higher than one year ago. The 1927 hay crop, when cured without too much rain, has been in the main a very good one, but the prospects for corn, as announced by the United States Department of Agriculture and the Pennsylvania State Department of Agriculture, are but 71% of a full crop for Pennsylvania. These figures contrast sharply with the average for the past five years of 85%. The Pennsylvania shortage under the 1926 crop is estimated at 14,000,000 bushels. The corn situation may be improved by an unusual postponement of the first frost date, but, on the other hand, an early

(Continued on page 8)

How the Modified Plan Affects Individual Shipper

It is important that every member of the Inter-State Milk Producers Association understand very clearly both the purpose of the recent change in the application of the so-called "basic and surplus plan" and its effect on the prices to be received by each individual producer and the advantages gained by the full cooperation of the membership at this time.

Each producer should arrange so that his production during October, November and December of 1927 shall be in line with his regular production. In other words, each producer must make a basic quantity this fall which will be used in establishing the basic average

The important fact to remember is that this fall's production will figure prominently in the establishment of future basic quantities and it is the policy of the association to provide in its arrangements that each year's basic quantity shall thus be used in the future.

One important reason which prompted the directors to provide for using the average of two or more years in the establishment of a basic quantity was because it was found that oftentimes, due to situations over which the individual farmer had no control, his October, November and December production for one year might be much below his average, and it seemed to be more fair to use the average of two or

The Inter-State Basic and Surplus Plan For 1928

The following is an application of our method of determining producers' basic and surplus quantities to apply for the remainder of 1927 and for the year 1928:

- 1—That the present basic quantity of all farmers shipping to cooperating dealers shall be used in making payments for the remainder of 1927.
- 2—That to determine basic quantities to be used for payment of milk purchased during 1928, the following method shall apply, except in cases where special arrangements have already been made by individual buyers. Determine the average quantity shipped by each producer during October, November and December, 1927, and add to this average the present basic quantity of each producer, dividing by two the sum obtained.
- 3—Every producer whose herd is tested for tuberculosis after January 1, 1927, shall be paid in accordance with his present basic quantity for the balance of 1927 and during the year 1928, except when the producer prefers to have his basic quantity determined in accordance with Section 2.
- 4—Any new shipper starting after October 1, 1927, is to be paid on a basis of 70% basic and 30% surplus of each month's shipment during the balance of 1927. During 1928 he shall be allowed a basic quantity determined by taking 70% of the average amount shipped during October, November and December, 1927.
- 4A—In the case of a shipper starting to ship after January first, 1927, and one who was paid on a basis of less than 70 per cent. basic and thirty per cent. surplus, starting October first and continuing through November and December, he shall be paid 70 per cent. basic and 30 per cent. surplus. His basic for 1928 shall be established by taking his full average production for October, November and December, 1927, added to 70 per cent. of his full production for that period and divided by two.
- 5—Any new producer starting after January 1, 1928, shall establish a basic quantity for that year according to agreement.

on which payments will be made to him for the next twelve months. As announced in the Review for July, the present basic quantity will be used in making payments during the remainder of 1927 and that for next year the basic quantity to be used for making payments shall be obtained by taking the average of the present basic quantity of each producer and the average production of the three fall months of 1927.

For instance, if Mr. Jones has a present basic average of 5000 pounds, this shall be used as his basic quantity during the remainder of 1927; if his average production for the three months, October, November, and December, 1927, is 7000 pounds, then the basic average which he establishes to be used during 1928 will be the average of 5000 and 7000 pounds, or 6000 pounds.

There are a number of provisions in the new arrangement to cover special cases, but these are not important to the rank and file of our membership.

It will be noted that next year farmers have the added advantage of having the higher of the 1925 and 1926 basic quantities to use in averaging with the 1927 fall production.

The question arises,—what will be the total quantity of the milk produced by all of the milk producers in the Philadelphia Milk Shed during October, November and December, 1927? Will it be more or less than in 1926? Than in 1925? Whatever it is, the amount of this production will largely influence the success of the Association management in selling the milk of its members to the very best advantage next year and thereafter. This fact is now generally understood by our members. But perhaps all of our members do not appreciate their personal responsibility in relation to the market. The total production during each of the so-called "basic" months is the sum of the individual totals as produced by each producer during these months.

INTER-STATE MILK PRODUCERS' REVIEW

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1879.



Continued cool weather has resulted
in low average temperatures almost
throughout the month of August.

During the last half of the month
record low temperatures were reached
in the Middle and North Atlantic
States. The government reports the
coolest August for twenty-three years.
From York, Pa., according to weather
statistics a trace of snowfall was re-
ported during the closing week of the
month, with temperatures down to 48
degrees. During the same period the
temperature in Philadelphia fell to 51
degrees.

Heavy gales and high winds were also
reported during the latter part of the
month in some sections of the Phila-
delphia Milk Shed.

Taken on the whole August tempera-
tures have had a retarding effect on the
growth of corn and other small grains
although for the most part this month
has been very favorable for pasture
conditions.

Officers and members of Locals
throughout the Philadelphia Milk Shed,
should begin planning now for the
Eleventh Annual Meeting of the Inter-
State Milk Producers' Association,
which will be held in Philadelphia, Pa.,
November 28th and 29th, 1927.

The meetings will be held at the
Benjamin Franklin Hotel, 9th and Chest-
nut Streets.

Every Local of the Association should
be represented by official delegates and
by as many individual members as
possible.

Blank Proxy Forms have been sent
to the officers of the Locals as usual but
every possible member should attend.
Learn what your association is doing.
Learn its plans for the future and then
plan for the best possible cooperation in
the field so that the membership on the
whole can obtain the full benefit of its
work.

The annual meeting of the Inter-State
Milk Producers' Association is the mem-
bers own meeting. Do your part in
attending and taking part in the busi-
ness affairs of the organization.

Sell the cripple, defective, and poor-
producing cows and give those that re-
main a little more feed.

Is there any doubt in your mind?

Just to emphasize the point
—Do you fully understand
the proposed plan for estab-
lishing your Basic Average—
under the 1927-1928 Philadel-
phia Selling Plan of establish-
ing your basic average?

If you do not—inform the
President or Secretary of
your Local, or any Director
or officer of the Association,
who in turn can call a meet-
ing and have some one from
the Philadelphia office attend
and explain the various de-
tails.

Plans for these meetings
should be made at once to
insure satisfactory date.

21st National Dairy Show

The 21st annual National Dairy Show,
will be held this year in connection with
the Tri-State Fair, Memphis, Tennessee,
October 15th to 22nd.

There will be the usual exhibition of
dairy cattle, including Ayrshires, Brown
Swiss, Guernseys, Holsteins, and Jer-
seys, in the various classes.

Awards will also be made for county
classes, special breedings, type and pro-
duction awards, Herdmen prizes, etc.

From present indications the exhibit
promises to be an extensive one.

The exhibit takes the place of the
usual demonstration heretofore staged in
connection with the National Milk Dis-
tributors and National Ice Cream Man-
ufacturers Exhibition which this year
are being held at other individual
places.

Match Care

Watch a good woodsman light his pipe.
He shakes the match out, feels it with
his finger, and nine times out of ten will
break it in two and then look for a safe
place to throw it. A match can not be
broken with ease and safety unless it is
thoroughly out, and a match that is
thoroughly out can not start a fire. The
carelessly flipped match is responsible
for a considerable percentage of the dis-
astrous fires both in city and forest.
When you have finished lighting your
pipe, your cigar, or cigarette break the
match in two pieces, cautions the Forest
Service of the United States Department
of Agriculture.

Pennsylvania Farm Pro- ducts Show January 17-20

The twelfth annual Pennsylvania
Farm Products Show will be held in
Harrisburg, January 17, 18, 19 and 20,
1928. This date was recently approved
by the State Farm Products Show Com-
mission, upon recommendation by the
General Committee which represents more
than 25 farmers' organizations, the
Pennsylvania State College, Department
of Agriculture, and the Department of
Public Instruction.

Show Healthy Cattle Only

Showing at both local and state fairs
offers an excellent method of advertis-
ing and helps in establishing a market
for surplus cattle. All animals to be
exhibited should be tuberculin-tested
and in good health. Selection should
be made on type and condition, while
vigor and good size for their age also
should be considered in choosing the
younger entries.

MARKET CONDITIONS

Continued cool weather almost
throughout the month of August has
had a marked influence on both produc-
tion and consumption.

The plentiful rainfall together with
the moderate temperature have resulted
in splendid pastures throughout most
sections of the Philadelphia Milk Shed
and the result has been a sustained flow
of milk. On the other hand the same
conditions have markedly retarded con-
sumption. This has been especially
noticeable in the demand for ice cream,
which is far below normal.

Supplies on the whole have been
materially in excess of the basic average
and also in many cases dealers have not
been able to sell all the basic milk as
fluid milk and table cream.

The plan of eliminating for this year
the customary 10 per cent advance in the
basic quantity in July and August and
the 15 per cent in September has been
an important factor in stabilizing the
situation during the past month.

July Market Prices

Grade B market milk, three per cent
butterfat content (basic quantity aver-
age), delivered f. o. b. Philadelphia,
during August is quoted at \$3.29 per
hundred pounds.

The price of basic milk (basic quan-
tity average), three per cent, butterfat
content, delivered at Receiving Stations,
in the 51-60 mile zone, during August is
quoted at \$2.71 per hundred pounds.

The usual butterfat differential and
freight rate variations applying at other
mileage points in the territory, are
shown by quotations on page 5, in this
issue of the Review.

The price for Class I surplus milk,
for July, three per cent butterfat con-
tent, at all Receiving Stations, is \$1.57
per hundred pounds. For f. o. b. Phila-
delphia delivery, this price is quoted at
\$2.14 per hundred pounds, or 4.65 cents
per quart.

August Butter Market

The demand for butter has been fairly
regular throughout the month with-
standing the marked increase in stor-
age stocks. The estimated total hold-
ings on August 27 in the United States
was 162,251,000 pounds as compared to
139,103,000 pounds one month ago.

Stocks in the 26 leading cities on
August 27 aggregated 116,033,000 pounds
as compared to 102,711,000 pounds on
July 31st, and 105,162,000 pounds on
August 27, 1926.

The increase during the past month
was somewhat heavier than generally
expected and the upward tendency of
the market, particularly late in the
month has been comparatively well
maintained by consumer buying.

The price of butter during the month
has been strong. Quotation of 92 score
solid packed butter, New York City,
opened at 40½ cents, there was a gradual
upward trend during the first two weeks
when 41½ cents was reached, then a tem-
porary reaction to 41 cents. The market
then steadily advanced, closing at the
end of the month at 44 cents.

The average price of 92 score solid
packed butter, New York City, on which
August surplus was based was com-
puted to be 41.61 cents per pound as
compared with .4188 cents per pound
one month ago.

Eleventh Annual Meeting

OF THE

Inter-State Milk Producers' Association

TO BE HELD IN THE

BENJAMIN FRANKLIN HOTEL
PHILADELPHIA, PA.

NOVEMBER THE 28th and 29th, 1927

THE MEMBERSHIP AT LARGE
IS INVITED

Every Inter-State Local Should Send Accredited Delegates

Annual Banquet November 28th, 1927

SPECIAL ENTERTAINMENT FOR THE LADIES

Cold Storage Holdings on Food Show Increase

Increased cold storage stocks of
poultry, meats, butter and eggs on
August 1 as compared with the same
date last year are reported by the
Bureau of Agricultural Economics,
United States Department of Agricul-
ture.

Total holdings of frozen poultry, in-
cluding broilers, fryers, roasters, fowls,
turkeys and miscellaneous poultry are
placed at 42,302,000 against 35,793,000
pounds August 1, 1926, and a five-year
average of 38,973,000 pounds.

Meat stocks, including beef, pork,
lamb and mutton totaled 944,459,000
pounds August 1 against 747,987,000

pounds last August and a five-year av-
erage of 848,058,000 pounds.

Holding of creamery butter aggre-
gated 145,146,000 pounds compared with
131,152,000 last year, and stocks of case
eggs were 10,737,000 cases against
9,845,000 on the same date a year ago.
American cheese supplies are smaller
with 67,089,000 pounds compared with
73,681,000 pounds a year ago.

Frozen pork supplies, with 214,428,000
pounds on August 1, were greatly in
excess of last year's supply of 133,104,-
000. Frozen beef has declined from
23,509,000 pounds last year to an
August 1 stock of 18,515,000 pounds.

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN

The basic price quoted below for August, 1927, is to be paid by cooperating dealers on
the average basic quantity established for each producer. For all milk bought in excess of
the basic amount, the surplus prices quoted below for the month of August are to be paid.
Beginning with January, 1927, the basic quantity will be established by using the higher
average basic quantity established in October, November and December of either 1925 or
1926.

These quotations are based on 3% butterfat milk and a differential of 4 cents for each
tenth point and 2 cents for each half tenth point up or down and are for all railroad points.
(Inland stations carry differentials subject to local arrangements.)

This price list is issued with the understanding it is not to be paid to producers and that all
buyers using it as a basis of payment to producers, shall in addition thereto make the follow-
ing contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2¢ per 100 pounds (46½ quarts)
of all milk purchased from any producer at price listed herein.

(2) To the Inter-State Milk Producers' Association 2¢ per 100 pounds (46½ quarts)
of all milk bought from members of said Association.

(3) To the Philadelphia Inter-State Dairy Council 2¢ per 100 pounds (46½ quarts)
of all milk bought from other producers at price listed herein.

The funds so derived are to be used by the recipients for improving standards of quality
in production and distribution of milk in the Philadelphia Milk Shed; for improvement and
for an educational campaign advertising the food value of dairy
products.

BASIC PRICE		BASIC PRICE	
August		August	
F. O. B. Philadelphia		County Receiving Stations	
GRADE B MARKET MILK		GRADE B MARKET MILK	
Test	Price	Test	Price
per cent.	per qt.	per cent.	per qt.
3.0	\$3.29	3.0	\$2.71
3.1	3.31	3.1	2.73
3.2	3.33	3.2	2.75
3.3	3.35	3.3	2.77
3.4	3.37	3.4	2.79
3.5	3.39	3.5	2.81
3.6	3.41	3.6	2.83
3.7	3.43	3.7	2.85
3.8	3.45	3.8	2.87
3.9	3.47	3.9	2.89
4.0	3.49	4.0	2.91
4.1	3.51	4.1	2.93
4.2	3.53	4.2	2.95
4.3	3.55	4.3	2.97
4.4	3.57	4.4	2.99
4.5	3.59	4.5	3.01
4.6	3.61	4.6	3.03
4.7	3.63	4.7	3.05
4.8	3.65	4.8	3.07
4.9	3.67	4.9	3.09
5.0	3.69	5.0	3.11
5.1	3.71	5.1	3.13
5.2	3.73	5.2	3.15
5.3	3.75	5.3	3.17
5.4	3.77	5.4	3.19
5.5	3.79	5.5	3.21
5.6	3.81	5.6	3.23
5.7	3.83	5.7	3.25
5.8	3.85	5.8	3.27
5.9	3.87	5.9	3.29
6.0	3.89	6.0	3.31
6.1	3.91	6.1	3.33
6.2	3.93	6.2	3.35
6.3	3.95	6.3	3.37
6.4	3.97	6.4	3.39
6.5	3.99	6.5	3.41
6.6	4.01	6.6	3.43
6.7	4.03	6.7	3.45
6.8	4.05	6.8	3.47
6.9	4.07	6.9	3.49
7.0	4.09	7.0	3.51

When milk is not tested, the price f. o. b.
Philadelphia is 8 cents per quart.

AUGUST SURPLUS PRICE		AUGUST SURPLUS PRICE	
F. O. B. Philadelphia		At All Receiving Stations	
Test	Price	Test	Price
per cent.	per 100 lbs.	per cent.	per 100 lbs.
3.0	\$2.14	3.0	\$1.57
3.1	2.16	3.1	1.59
3.2	2.18	3.2	1.61
3.3	2.20	3.3	1.63
3.4	2.22	3.4	1.65
3.5	2.24	3.5	1.67
3.6	2.26	3.6	1.69
3.7	2.28	3.7	1.71
3.8	2.30	3.8	1.73
3.9	2.32	3.9	1.75
4.0	2.34	4.0	1.77
4.1	2.36	4.1	1.79
4.2	2.38	4.2	1.81
4.3	2.40	4.3	1.83
4.4	2.42	4.4	1.85
4.5	2.44	4.5	1.87
4.6	2.46	4.6	1.89
4.7	2.48	4.7	1.91
4.8	2.50	4.8	1.93
4.9	2.52	4.9	1.95
5.0	2.54	5.0	1.97
5.1	2.56	5.1	1.99
5.2	2.58	5.2	2.01
5.3	2.60	5.3	2.03
5.4	2.62	5.4	2.05
5.5	2.64	5.5	2.07
5.6	2.66	5.6	2.09
5.7	2.68	5.7	2.11
5.8	2.70	5.8	2.13
5.9	2.72	5.9	2.15
6.0	2.74	6.0	2.17
6.1	2.76	6.1	2.19
6.2	2.78	6.2	2.21
6.3	2.80	6.3	2.23
6.4	2.82	6.4	2.25
6.5	2.84	6.5	2.27
6.6	2.86	6.6	2.29
6.7	2.88	6.7	2.31
6.8	2.90	6.8	2.33
6.9	2.92	6.9	2.35
7.0	2.94	7.0	2.37

MONTHLY BASIC PRICES OF GRADE B
OR MARKET MILK

3 per cent butterfat content		F.O.B. Receiving	
quart Phila.		station 50 mile	
zone per cwt.			
1926	1927	1926	1927
January 1-15	6.8	January 1-15	2.60
January 16-31	6.3	January 16-31	2.37
February	6.3	February	2.37
March	6.3	March	2.37
April	6.3	April	2.37
May	5.8	May	2.13
June	4.8	June	2.13
July	4.95	July	2.13
August	5.0	August	2.13

1926	1927	1926	1927
July	1.96	January	2.71
August	1.96	February	2.71
September	2.10	March	2.71
October	2.21	April	2.71
November	2.37	May	2.71
December	2.59	June	2.71
		July	2.71
		August	2.71

SEPTEMBER PRICES

Inter-State Milk Producers' Association
The price paid for basic milk during
September, will, subject to market conditions,
be the same price as quoted for August,
1927. The basic quantity will be established
by using the higher of the 1925 or 1926
established basic amounts. First surplus
milk, in amount equal to the basic quantity,
will be paid for on the basis of 92 score
solid packed butter for the month at New
York City, plus 20 per cent. Second sur-
plus milk, under the Philadelphia Selling
Plan, will be eliminated during July, August
and September. Owing to the present heavy
supply and the decrease in consumption,
and to unfavorable weather conditions, the
usual 10 per cent increase in the basic
average to be paid for at basic prices has
upon agreement, been eliminated during the
month of August. The usual increase of
15 per cent in the Basic Quantity during
September, will, for the same reason also
be eliminated.

AUGUST BUTTER PRICES

92 Score, Solid Pack			
	Philadelphia	New York	Chicago
1	41½	40½	39½
2	41½	40½	39½
3	41½	40½	39½
4	41½	40½	39½
5	41½	40½	39½
6	41½	40½	39½
7	41½	40½	39½
8	41½	40½	39½
9	41½	40½	39½
10	41½	40½	39½
11	41½	40½	39½
12	41½	40½	39½
13	41½	40½	39½
14	41½	40½	39½
15	41½	40½	39½
16	41½	40½	39½
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31	41½	40½	39½
32	41½	40½	39½
33	41½	40½	39½
34	41½	40½	39½
35	41½	40½	39½
36	41½	40½	39½
37	41½	40½	39½
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81	41½	40½	39½
82	41½	40½	39½
83	41½	40½	39½
84	41½	40½	39½
85	41½	40½	39½
86	41½	40½	39½
87	41½	40½	39½
88	41½	40½	39½
89	41½	40½	39½
90	41½	40½	39½
91	41½	40½	39½
92	41½	40½	39½

Inter-State Directors Hold Field Meeting Delaware and Maryland Territory Visited

(Continued from page 1)

blished a bull club, with five bulls changing every two years. I have 9 heifer calves of good pedigree from the first bull located on my farm. We have a cow testing association that has been in operation two years. It is a cooperative testing association in which the farmers themselves do their own sampling and weighing.

"The program of better production, better sires have gone forward rapidly in this community and we must give credit to the farmers as they are responsible, they are the men who have done the work.

Mr. Thompson has a milking herd of 22 cattle and 9 heifers. He operates an 80 acre farm with several other farms as feeders for his cow feed. A new dairy barn of modern type is the corner building having been destroyed by fire several months ago.

Passing the Grade A Plant of the Supplee-Willis-Jones Milk Company at Nassau, the group proceeded to Rehobeth, Delaware, on the shore of the Atlantic Ocean, where the over-night stop was made.

Directors' Meeting

The regular bi-monthly meeting of the Directors of the Inter-State Milk Producers' Association was held at Rehobeth, Delaware, on Thursday, August 25th, at the Belhaven Hotel. Every director and officer of the association was in attendance.

Secretary Balderston read the minutes of the preceding meeting, the minutes of the various executive committee meetings held during the month and a record of expenditures made since the last directors meeting. These were approved by the Board.

President Allebach then announced the various standing committees for the coming annual meeting of the association. He included the committees on annual banquet, Messrs. Shangle and Brinton; Entertainment, Messrs. Twinning and Cohee; and on program Messrs. Willis, Miller and Balderston.

The Ladies Annual Meeting Committee was named as follows. The committee in itself to name its own chairman. Mrs. H. D. Allebach, Mrs. R. W. Balderston, Mrs. Robert F. Brinton, Mrs. C. I. Cohee; Mrs. Frederick Shangle, Mrs. F. M. Twinning, and Mrs. A. B. Waddington.

Marketing conditions were broadly discussed in so far as they pertained to nearby milk sheds.

President Allebach in reviewing the markets in the Philadelphia Milk Shed stated that in view of the high production and the consequent decrease in consumption, due largely to the cool weather conditions the customary increase in the 10 and 15 per cent of the basic amount during August and September, 1927, would be eliminated. In quite a few instances buyers are manufacturing some of their basic milk in addition to the surplus supply.

Mr. Allebach also announced that in preparing the basic and surplus schedule one item had been overlooked. That is the shipper who since January, 1927, has been on a 50-50 basis. Under the present plan the following class has been adopted and agreed to by the larger buyers.

4A. In the case of a shipper

starting to ship after January first, 1927, and one who was paid on a basis of less than 70 per cent. basic and thirty per cent. surplus, starting October first and continuing through November and December, he shall be paid 70 per cent. basic and 30 per cent. surplus. His basic for 1928 shall be established by taking his full average production for October, November and December, 1927, added to 70 per cent. of his full production for that period and divided by two.

General marketing conditions have been good although consumption has been retarded by the prevailing cool weather.

R. W. Balderston further emphasized the necessity of farmers making an average basic quantity during the coming October, November and December. The supply factor under the associations marketing plan is an important one and should never be overlooked.

Secretary Balderston then announced the names of the following Directors of the Association whose terms would expire with the coming annual meeting: Messrs. Frederick Shangle, F. M. Twinning, J. H. Bennett, Ivo V. Otto, R. I. Tussey, J. A. Poorbaugh, A. R. Marvel and C. E. Preston.

Frederick Shangle, chairman of the Annual Meeting and Banquet Committee made a brief report, after which the meeting adjourned for dinner.

Following the dinner, Mr. Allebach called upon Mr. W. E. Thompson, of the Nassau Local of the Inter-State Milk Producers' Association. Mr. Thompson briefly expressed his thanks to the officers and directors for their visit to the Nassau community and believed that their visit would be an inspiration to the farmers to do even better work than they have done in the past.

E. H. Donovan, director from Delaware and chairman of the program committee was then introduced. Mr. Donovan expressed his appreciation at having the directors of his association visit his district, so that our Delaware farmers may have an opportunity to meet them. "I feel assured that the knowledge and information that the Directors have obtained by this visit will be of great value to them in considering the business and problems of the association in the future."

The chairman then introduced A. R. Marvel, of Talbot County, Maryland, into which territory the group would journey the next day.

Mr. Marvel expressed his pleasure in having the directors and the general office group visit the Eastern Shore. "The farmers of Talbot County have been members of your association for about ten years and much good and increased revenue has come to them through your association. We hope you will be pleased with our country and our hospitality and that you will come again to visit us. Had you the time to stay with us we could show you many things of interest to you in this section of the Eastern Shore."

The chairman then introduced Dr. Clyde L. King, of the Wharton School of Political Economy. Food Administrator during the World War and an active participant in the affairs of the Inter-State Milk Producers' Association.

After reviewing briefly the various benefits the milk producer had obtained through his membership in the Inter-State Milk Producers' Association during the past eleven years he summed up the profits on the investment of the milk producer in his association dues as follows:

Additional price, represents at least 100 per cent profit.
Milk value above other farm products, represents at least 100 per cent profit.
The Philadelphia Selling Plan, represents at least 100 per cent profit.

Check testing and weighing service, represents at least 100 per cent profit.
Quality control work, represents at least 100 per cent profit.

Improved dealer attitude, represents at least 100 per cent profit.

Consumer cooperation, represents at least 100 per cent profit.
Total, 700 per cent profit.

To which might be added:

Greater self-respect and self-confidence, represents at least 100 per cent profit.

True team work spirit, represents at least 100 per cent profit.

Total, 900 per cent profit.

"On this basis of comparison you will see" said Dr. King, "that I can conservatively figure an aggregate gain of 900 per cent for every farmer operating under the plan of the Inter-State Milk Producers Association."

Congressman R. G. Houston, of Delaware, was introduced as the next speaker by Director E. H. Donovan, as a farmer congressman, who said in part that he was a native of Sussex County. He welcomed the association to his state. "This is a day of organization, every group in industry has its organization and the government itself is one big organization. We, in this section, know the value of your organization; its value to our farmers as it has proven a success as far as this community is concerned. It means prosperity, better homes and better farmers. Cooperative work brings success. Efficiency is the simple factor that brings success, be it on the farm or in other fields of activity. There has been too much waste in ordinary farm practice. You have adopted a policy which eliminates excessive production and you are the better for it. Its the little things that count. Much of the success in present day business and farm life depends on the individual yourself. Make your plans on a business basis and success will be yours.

Friday's Tour

The second days tour covered a visit through many of the Eastern Shore Counties of Maryland. The group left Rehobeth, at 7:30 A. M., Standard Time. The first stop was made at the farm of S. K. Andrews, a director of the Association, near Hurlock, Dorchester County, Maryland. The second stop was at the Hurlock Plant of the Harbison Dairies. This plant is the largest on the Eastern Shore, with 515 shippers, who deliver nearly 450 cans of milk. This is all high butter fat test B milk averaging 4.5 per cent fat on a yearly average.

The next stop was at the farm of Director A. R. Marvel, near Easton, Md., in Talbot County, who in addressing the visitors said that he felt greatly honored in having the directors visit his home. "My six years of association

with you as a director has been a pleasant one and I greatly appreciate your visit. My only regret is that you cannot spend more time with us and to see what we have both historically and agriculturally. Diversified crops and dairying are our chief occupations, and we are getting some profit out of dairying." Mr. Marvel then introduced Mr. T. Hewitt Henry, president of the Farmers and Merchants Bank, Easton, Md., who made a brief address. "I am glad to renew my acquaintance with some of you and welcome you all to Talbot County. We appreciate what your association has done. Your efforts for a lasting benefit at Cordova, and your wisdom has shown our farmers the necessity of proper production and the necessity for milk of a proper quality. We appreciate what you stand for and we feel very kindly and gratefully toward you for what you have done.

A visit was then paid to the Third Haven Meeting House, at Easton, Md., which was erected by Friends in 1682-1684. In 1797 the building was made wider by extending the rafters on one side of the ridge pole. Stoves were introduced and chimneys added in 1781. Some of the exterior woodwork still survives. The first meeting was held on October 24, 1684, and the last regular meeting was held on January 4, 1880. Continuous records of the meeting have been preserved since 1676.

County Agent Brown, of Talbot County, made a brief address at this point, expressing his intention to cooperate with the Inter-State Milk Producers' Association in its work in that county. "There is a vast field to be covered but with your assistance a great deal of good work can be done."

Dinner was served at Wye Mills M. E. Church House, Wye Mills, Md., by the ladies of the church, and was every thing that the farmer or any one else could desire.

The trip then proceeded to the farm of E. R. Pennington, another director of the association whose farm is near Kennedyville, Kent County, Md. At this farm the Kent County Calf Club was holding a judging demonstration, under the direction of County Agent Derrick, of Kent County. Some 200 farmers and members of the club were in attendance. There were outstanding exhibits of cows and calves of the Holstein, Guernsey and Jersey breeds. Mr. Pennington has a herd of 20 milking cows and 17 head of calves and bulls of exceptional breeding. His herd is the home of King Segis Pontiac Herringo and outstanding Holstein Bull, whose dam holds the State Record with a yearly record of 24,400 pounds milk and 1219 pounds fat.

At Mr. Pennington's farm, brief addresses were made by H. D. Allebach, president; Frank P. Willis, former president and R. W. Balderston, secretary of the association. August A. Miller, Editor of the Milk Producers' Review and C. I. Cohee, Director of the Quality Control Department of the Philadelphia Dairy Council also made brief addresses.

At this point the group tour of the directors came to an end, the various automobiles proceeding by the best routes, direct to their homes.

Late Corn Crop Makes Farm Situation Uncertain

The backward and unpromising condition of corn is the feature of the crop situation, according to the Bureau of Agricultural Economics, United States Department of Agriculture, in its August 1 report on the agricultural situation.

While early planted corn is well out in tassel, late plantings have made poor growth. The net results is a very spotted corn prospect, with the possibility that a considerable part of the crop will ear later on short stalks and the frost hazard will loom large.

The other principal crops made up some time during the past month and are now nearer normal. Haying is well along, a large crop secured in generally good condition, according to the report. Potatoes are doing very well and appear likely to make an ample though not excessive crop.

Wheat harvest is now moving up into the North, with threshing returns becoming more satisfactory. Winter wheat yields were disappointing in the southern belt but Nebraska is threshing out the greatest crop in its history. Spring wheat in the North shows the best prospect in five years except in some local areas bordering the Rocky Mountain territory. The world wheat crop appears about the same as last year, more wheat in Europe being offset by probable shorter supply in Canada.

"Our Wheat Belt" says the report, "reverses the conditions of last year, when the southern area had an excellent crop and northern spring wheat was a near failure." Another reversal of conditions is noted in the Corn Belt where the present high-priced corn and low hogs represent the opposite of last year's situation.

The curtailment in Corn Belt feeding operations appears likely to extend to lambs. This will act presumably in the direction of higher lamb prices next winter. The bureau says that the very poor lamb crop in the West this season has temporarily averted a market excess which the sheep industry is due to face eventually if it continues to increase by a million head a year as it has done since 1922.

The general effect of price movements during the last two months, according to the bureau, has been to improve the exchange position of the important cash crops but to cause some recession among the livestock products. Cotton, corn, wheat, and potatoes are noted as being relatively higher priced while hogs and eggs are now selling at serious disadvantage to producers.

The bureau's index of purchasing power of farm products in terms of non-agricultural commodities stands at 86, compared with 87 one year ago, 91 two years ago, 82 three years ago, the five pre-war years being considered as 100.

Issue New Ice Cream Circular

Ice Cream Manufacturer, a new circular just issued by the Pennsylvania State College agricultural extension service, declares that Pennsylvania is the leading state in the Union in the production of ice cream. According to the figures given, the Keystone state produced 34,100,000 gallons of ice cream in a year. Figuring a gallon of ice cream to weigh 4.5 pounds and to test 10 per cent fat, the ice cream produced in Pennsylvania in 1923 utilized the equivalent of nearly 400,000 pounds of milk to supply just the fat in the ice cream, or more than 11 per cent of the milk produced in the state.

Winter Wheat Situation

Favorable domestic as well as Canadian conditions have had a definite downward trend in prices.

Wheat for October delivery, as quoted on August 26th, by the Bureau of Agricultural Economics, declined about 6½ cents a bushel in Canada, and this was reflected in a decline of about 2c per bushel in Liverpool.

For September delivery wheat delivered in Chicago, Minneapolis and Kansas City, declined 5c a bushel.

The movement of winter wheat to market has fallen off materially and good milling grades are selling at steady premiums over future prices. No. 2 Red Winter at Baltimore was quoted (August 25th) at \$1.44 with garlicky, of the same grade, at about 7½ cents per bushel discount. The Philadelphia market, on the same date was steady, with No. 2 Red Winter quoted at \$1.43 to \$1.44 per bushel, with an 8 cent discount for garlicky.

Japanese Beetle Parasite

A large shipment of a wasp, a parasite of the Japanese beetle, was received from Korea during June. The parasites were shipped as adults in specially prepared tins containing supplies of water and food. The success of the shipment was remarkable, according to the Bureau of Entomology of the United States Department of Agriculture, as 80 per cent of the parasites came through in good condition after being 20 days en route. The wasps were used in part for immediate colonization and in part for propagation, the latter resulting in the production of about 15,000 eggs. The parasitized beetle larvae bearing these eggs were transferred from the laboratory at Riveron, N. J., to the field, where, under normal conditions they are able to develop into adult wasps.

Some wasps of this species are being colonized on Long Island, where they are being used in work against the Asiatic beetle, another injurious introduced pest.

Crop and Labor Situation in New Jersey

From statistics now available, which cover the reports for the month of July, 1927, the pasture conditions in that state, as of August first, were 83 per cent of a normal as compared to 78 per cent one month ago.

The condition of corn, on the same date was 78 per cent of a normal; indicating a total yield of 6,956,000 bushels as compared with 8,648,000 bushels last year and 8,954,000 bushels the averages for the past five years.

Labor conditions on the farm on August 1st, was estimated at 90 per cent of a normal and the demand 95 per cent of a normal, resulting in a potential farm labor supply of 94.7 per cent as compared to 95.7 on July 1st and 91.4 per cent on August 1st, 1926.

On July 1 a total of 17,600,380 cattle in the United States were under supervision for the eradication of bovine tuberculosis. Besides this number, considerably more than 4,000,000 cattle are on waiting lists and will be tested as soon as the Federal, State, and county veterinary inspectors complete other work for those owners who signed up earlier for tuberculin testing.

Uncle Ab says not to worry about the oncoming age any more than about the coming of any other good friend.

Plan now your MILK PROFITS for Winter

Look over your prospects for improving milk profits this winter. You know, by now, what roughage you will have—see, below, how there is a Quaker Dairy Ration to meet any situation, each of these feeds being exactly the protein concentrate that fits its indicated purpose. See the Quaker Dealer—arrange now for your winter supply so that you can avoid losses due to changing feeds.

Select the feed that fits your farm, your herd

Quaker Boss Dairy Ration is the ideal ration for cows receiving timothy hay, grass hays, straws, corn stover or other poor grades of hay.

Quaker Big Q Dairy Ration exactly meets the need of those herds receiving poor alfalfa hay, fair clover hay, or real choice mixed clover and grass hay.

Quaker Dairy Ration has no superior when cows are receiving choice clover hay, good alfalfa hay, or an excellent grade of fine mixed grass-and-clover hay; it is a good ration for dry stock and for young growing stock.

Quaker Sugared Schumacher Feed has a real place when the herd is receiving liberal quantities of choice alfalfa hay. It combines beautifully with any Quaker high protein feed. It is an ideal ration for all stock—dry stock, young growing animals, horses, sheep, swine, steers.

All Quaker Dairy Feeds contain molasses in dried form and are rich in the minerals cows must have to make milk.

Send for the FREE book—"The Dairy Herd."—It tells you just how to meet the feed requirements of your farm, your herd.

The Quaker Oats Company

CHICAGO, U. S. A.

Manufacturers of

Quaker
Ful-O-Pop
Poultry Feeds

Quaker
Green Cross
Horse Feed

Quaker
Pig-N-Hog
Meal

(BUY THE FEEDS IN STRIPED SACKS!)

Cooperative Cow

Sale in Ohio

A new line of service was rendered recently by the Cooperative Pure Milk Association, Cincinnati, Ohio, when it held a cooperative cow sale at Hamilton. Three car loads of Holstein, Guernsey and Jersey cows were brought in and put up at auction to the highest bidders. Indiana and northern Wisconsin had been scoured to secure desirable animals. Eighteen Holstein cows, 24 Guernseys, 14 Jerseys, and 12 Guernsey heifers were sold. The average sale price for these dairy cattle was about \$160.

These sales are a part of the program being carried out by the association in an effort to secure an increased quantity of milk for meeting the fall demand.

Foot and Mouth Disease

The official report of the commission of three scientists which devoted a year's study to foot and mouth disease in European countries confirms previous evidence concerning the danger from this malady. In spite of vigorous efforts on the part of most European countries to control the disease, it is causing heavy losses in the countries where present. The report of the commission shows the virus of foot-and-mouth disease to be unusually infectious, and also resistant to disinfectants. The United States fortunately is free from this foreign scourge. The chief barriers that are excluding it are stringent regulations and watchfulness of United States Department of Agriculture

What net profit will your cows make this year?



These eighteen cows on Amco-mixed feeds show an average profit per cow of \$168.76 for R. A. Eisaman, Irwin, Pa.

Pieterje Concordia Pontiac, 564849, one of Mr. Eisaman's cows which on Amco-mixed dairy feed netted her owner \$235.78 above feed cost in a year.

ACCORDING to Extension Bulletin 83 of the New York State College of Agriculture, a cow must produce \$100 worth of milk over feed costs before there is any profit in her. Hundreds of cows are doing this, and better, on Amco-mixed open formula feeds. The herd of R. A. Eisaman of Irwin, Pa., is an example. The Westmoreland County Cow Testing Association credits this herd with the following production for the year beginning September 1, 1925, and ending August 31, 1926.

Number cows.....	18
Total milk produced.....	178,926 lbs.
Average milk production.....	9940 lbs.
Value of product.....	\$5452.43
(Based on wholesale price)	
Cost of feed.....	\$2414.73
Net profit.....	\$3037.70
Average profit per cow.....	\$168.76

What Mr. Eisaman thinks of Amco feeds

Amco Feed Mixing Service
Peoria, Ill.

I have been feeding your Dairy and Poultry feed for the past four years. During this time I have been well pleased with the results obtained from feeding them. The fact that your feed always is up to standard and uniform in quality means a great deal to me; also I find that your feed has been universally cheaper in price than the feeds of like quality sold in this vicinity.

Prior to using your feeds, I had tried other commercial feeds but, of course, the fact that I am still feeding Amco-mixed feeds after four years use shows what I think of them.

Thanking you, I am

Irwin, Pa.
June 28, 1927

(Signed) R. A. EISAMAN

Any Authorized Amco Agent can supply you with the same feed Mr. Eisaman uses. If there is no agent in your town, write

DIVISION OFFICE: MUNCY, PA.



AMCO

FEED MIXING SERVICE

AMERICAN MILLING COMPANY
EXECUTIVE OFFICES: PEORIA, ILL.

Plants at: PEORIA, ILL.; OMAHA, NEB.; OWENSBORO, KY.
Alfalfa Plants at: POWELL, GARLAND, and WORLAND, WYO.

Cooperative Buying and Selling Increases

By H. A. Hanemann, Bureau of Markets
Pennsylvania Department of Agriculture

Pennsylvania farmers transacted a business of \$35,177,010 through their cooperative buying and selling corporations in 1926, according to figures which the Bureau of Markets has compiled. This is an increase of 13.8 per cent over the 1925 business of \$30,913,614 (corrected final compilations for the year). The seven large cooperatives, whose activities extend into several eastern states, transacted business amounting to \$28,876,419 with Pennsylvania farmers and 95 local organizations had total sales of \$6,300,591. In 1925, six interstate organizations did a business of \$24,319,211 for Pennsylvania farmers and the sales of 95 local associations amounted to \$6,594,403.

Nine organizations transacted \$29,936,932 or 85.1 per cent of the total

wool sales were slightly smaller. Sales of livestock by cooperative associations during 1926 amounted to \$134,412 and most of the business transacted was in dairy cattle. The table herewith shows how cooperative sales by commodities compare for the two years.

Milk marketing associations during 1926 showed a substantial growth in business. The two organizations supplying milk to the largest Pennsylvania markets (Philadelphia and Pittsburgh) namely, the Interstate Milk Producers' Association and the Dairyman's Cooperative Sales Company, showed an increase of 33 per cent and 9 per cent, respectively, in their sales for Pennsylvania farmers. The Dairyman's League Cooperative Association handled about 4 per cent less milk by volume, but its

Cooperative Sales by Commodities

	1926	Per Cent of total	1925	Per Cent of total
Milk and Milk Products.....	\$28,876,419	81.15	\$25,033,453	80.98
Fruits and Vegetables.....	1,016,124	2.89	1,105,824	3.58
Cattle.....	134,412	0.38	51,500	0.17
Eggs.....	96,000	0.27	89,910	0.29
Wool.....	73,882	0.21	79,183	0.25
Farm Supplies.....	5,311,299	15.10	4,553,744	14.73
	\$35,177,009	100.00	\$30,913,614	100.00

cooperative business done by incorporated farmers' associations in this Commonwealth in 1926. These were the Eastern States Farmers' Exchange of Springfield, Mass., the Dairyman's League Cooperative Association, Atlantic Coast Poultry Producers' Association of New York, Inter-State Milk Producers' Association of Philadelphia, Pa., Keystone Grange Exchange of Harrisburg, Pa., Dairyman's Cooperative Sales Company and Producers' Cooperative Commission Association of Pittsburgh, Pa., Keystone Cooperative Grape Association of North East, Pa., and Cooperative Grange League Federation Exchange of Ithaca, N. Y. In 1925, eight large organizations accounted for 82.3 per cent of the total cooperative business transacted for Pennsylvania farmers.

Milk Sales Show Big Increase

The largest increase in business in 1926, as compared with 1925, took place in the cooperative marketing of milk, as the sales of milk and milk products increased \$3,512,000 or 14.0 per cent. Most of this growth was due to an increase in the volume of milk handled but part was due to a higher average price during 1926. The value of fruit and vegetables sales declined because of low prices, although the volume handled by cooperative associations was greater than in the previous year. Egg sales increased in volume and dollars, but

sales in dollars were 4 per cent larger for its Pennsylvania members than in 1925. Nearly all of the local milk distributing plants and local creameries showed an increase in both volume and sales for 1926 as compared with the previous year.

Farm Supply Business Greater

Sales of farm supplies by cooperative associations were 16.6 per cent larger in 1926 than in the preceding year. Most of this growth was due to an increase in the number of associations selling supplies and to the growth in business of the interstate organizations (Eastern States Farmers' Exchange and Cooperative Grange League Federation Exchange) operating in this state. Thirty-four identical local purchasing associations sold \$1,460,910 of farm supplies in 1926 against \$1,473,245 in 1925, an increase of one-half of one per cent.

Growth in Membership

The total Pennsylvania membership of cooperative associations at the close of 1926 consisted of 44,510 farmers. This is an increase of 6.0 per cent over the total membership of 41,990 at the close of 1925. The number of Pennsylvania members in interstate associations totaled 32,437 at the end of 1926 as compared with 31,385 at the close of the preceding year, an increase of 3.2 per cent. Local associations had 12,072 members on December 31, 1926, against 10,605 a year previous, an increase of 14.4 per cent.

WHY PHILADELPHIA SELLING PLAN HAS BEEN MODIFIED

(Continued from page 3)

frost may practically ruin the crop of many farmers with late-planted corn, especially those who have not silos.

Under the Philadelphia Selling Plan favorable price can be maintained throughout the year to producers who live up to its specifications. It is just as necessary to maintain a good average under the present modifications of the

plan as it was formerly to make a "big basic average" when new averages were made each year, and it is likely to prove even more profitable from a long-time viewpoint, for the basis of payment for 1928 which was announced recently has eliminated much of the danger of over-production of basic milk which might if continued break the present price.

Use of Silos Increasing A. L. Haecker

During the year 1926 the American farmers added 9,240 silos to their equipment. From available figures there are now in the United States 531,696 silos. There was a greater increase in 1926 than in 1925, indicating that agricultural conditions are improving, especially in the live stock department. Reports to date show a substantial gain over 1926, and it is fair to assume that this percentage will increase as the season advances.

Wisconsin is the big silo state, and far outstrips all others in the number of silos in use. Wisconsin has 110,164 silos; and the next number is New York with 56,240, so that Wisconsin has over 50,000 more silos than any other state in the Union. The wide use of the silo in Wisconsin is a credit to the intelligence of their farmers, for practically every Experiment Station and Agricultural College has proven by many experiments and demonstrations that the silo is an economic institution in the production of stock and stock products. It might be mentioned here that Wisconsin has made a very fine showing in rural prosperity. Even during these past depressing years, their banks have had plenty of money, and failures are few.

Nationally, dairy and stock conditions are very much improved. Especially is this true of dairying. The cow keeper, during the past year has had a better return than any year since 1920. The future looks encouraging for the dairy farmer. He is protected with a substantial tariff against cheap importations. His product is in daily demand, and increasing in consumption.

More attention is being applied to the subject of economic production and this is the most beneficial of all, for the unprofitable cow is the one which causes over-production, and certainly a loss. To use better cows and give them better care is the easiest way to increase the profit in the business. These improvements are being brought about rapidly by the Cow Testing Associations, the Calf Clubs, and a desire to make a better profit in the business.

To feed with greater economy and less waste means a proper use of the silo, and the balancing of silage with protein forage such as legume hay and pasture. Competition is keen and in the end will weed out those who fail to keep pace with progressive, economic methods. Though we are the greatest users of silos among the nations, we are still only one-sixth supplied, using Wisconsin as a base.

Franklin County Farm Tour Sets New Mark

Four hundred Franklin county farmers visited the Pennsylvania State College last week in the largest single county auto tour ever seen at the Nittany institution. Nearly one hundred cars were in the train visiting the campus.

President R. D. Hetzel welcomed the visitors and Prof. H. G. Niesley, extension agricultural economist who recently returned from a trip in Europe, addressed the group on "Agriculture, at Home and Abroad." The Franklin countians spent nearly a day observing the work in progress at the agricultural experiment station and in getting acquainted with the college and the staff members.

Effect of Succulent Feeds on Flavor and Odor of Milk

To determine whether dried beet pulp, green oats and peas, pumpkins, carrots, sugar beets, rape, soybeans, and kale when fed to dairy cows impart undesirable flavors and odors to the milk, and to ascertain the best methods of feeding such crops and handling the milk, the United States Department of Agriculture has conducted feeding tests at its experiment farm at Beltsville, Md.

The cows selected for the investigations were giving milk relatively free from abnormal flavors and odors when fed a basic hay and grain ration, and varied in stage of lactation from those fresh to those nearing end of lactation period.

Besides the succulent feed the animals received, in proportion to milk produced, varying quantities of the following grain mixture: 100 pounds each of hominy feed, bran, and oats, and 50 pounds each cottonseed meal and linseed-oil meal. In addition they were given all the alfalfa hay they would readily consume. The cows were divided into groups of four each, and interchanged at intervals of four days.

Dried beet pulp soaked and fed wet one hour before milking in quantities up to 30 pounds produced but a slightly abnormal flavor and odor in the milk. The same ration immediately after milking had no effect on its flavor or odor. Similar results followed the feeding of a like quantity of green oats and peas one hour before and after milking. Both kale and rape fed in similar quantities one hour prior to milking produced a decidedly abnormal flavor and odor in the milk, but had a negligible effect when fed afterwards. Soybeans fed one hour before milking tended to improve the flavor and odor of the milk.

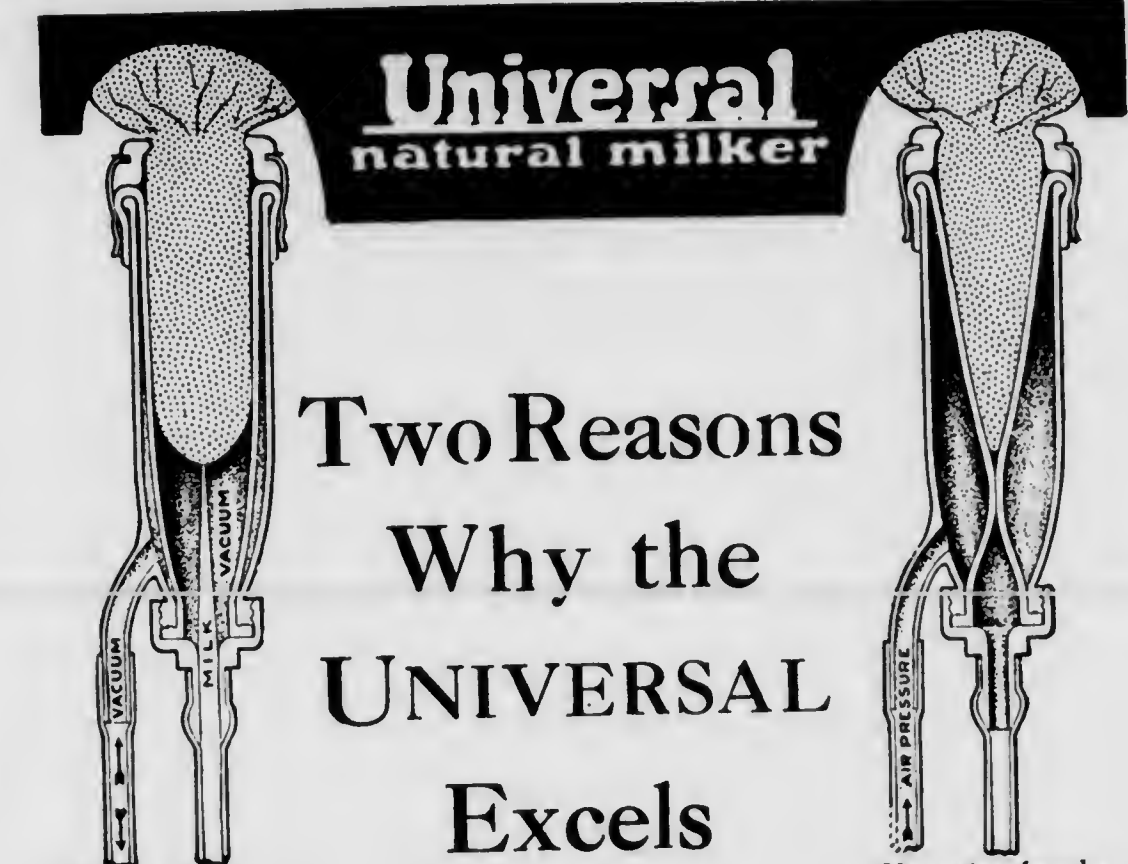
Further details of the experiments are given in Technical Bulletin No. 9-T, "Effect of Some Succulent Feeds on the Flavor and Odor of Milk," a copy of which may be obtained free upon request to the Department of Agriculture, Washington, D. C.

Many States Enter National Dairy Expo- sition Club Events

Entries in the dairy cattle judging contest and demonstration teams contest for 4-H Club members at the National Dairy Exposition closed August 1st, with a larger number of states represented than ever before. The following 25 states have entered teams in the club cattle judging contest: Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Vermont, Wisconsin and West Virginia.

In the demonstration event, 21 states have entered teams. This splendid entry, coming from such widespread sections of the country, indicates that the Club Department will serve a highly useful purpose in stimulating dairying all over the country and in the South particularly.

The club cattle judging contest will be held on Monday, October 17th. The demonstration teams will be on the program daily, from October 17th to 19 inclusive.



Two Reasons Why the UNIVERSAL Excels

Suction Impulse
Above illustration shows the suction impulse of the Universal milking cup.

Massaging Impulse
Above illustration shows the gentle massaging action of the rubber liner.

The two outstanding reasons why the Universal Milker is such a successful milker, are:

1. **Low Vacuum.** The Universal operates on a vacuum of 10 to 12 inches. This gentle suction is easy on the cow—she gives down her milk readily and more completely. You milk faster and cleaner. You save time and labor, get more milk, and the cow feels better.
2. **A perfect teat cup** that massages the teat. It "milks like the calf"—massages the teat from the end up, between suction strokes. It also has an alternating action—like milking with hands—two teats are massaged by the soft rubber liners of the teat cups while the other two teats are having the low vacuum suction applied to them. This gets all of the milk, and the cow likes it!



These are just two of many reasons why it will pay you to install a Universal Milking outfit in your dairy. Write for free copy of our catalog.

The Universal Milking Machine Co.

Dept. IM Waukesha, Wis. Syracuse, N. Y.

One Good Dairy Bull Goes to Block Every Eight Minutes

It is unfortunate for the dairy industry that good bulls are sent to the butcher along with the mediocre and scrubs when their service is no longer needed in the herd. A careful estimate, says Dr. J. C. McDowell, of the Federal Bureau of Animal Industry, shows that really high-class dairy bulls are going to the butcher at the rate of one every eight minutes from daylight to dark every day in the year. How to stop this great slaughter and keep these bulls for a lifetime service is one of the great problems in dairying today.

A study of cow-testing association records shows which are the good bulls and which the inferior ones. But, unfortunately, by the time these records are available most of these bulls have been slaughtered. Doctor McDowell says that it is of little use to learn how good a bull was after he is dead, so he is urging that some system of exchange be started at once among owners of well-bred bulls in order that such animals may be kept until the daughters have demonstrated their sire's true value.

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—Kinds that yield better,
costs you very little to
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You can raise 5, 8, maybe 10 more bushels to the acre with Hoffman's selected strains of heavy-yielding varieties. Our Seed Wheat is selected from choice crop that shows no smut. It is sound, plump wheat, harvested right and well-cured—

free from rye, garlic,
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and FREE Samples. This book describes eight tested varieties—both smooth-chaff and bearded. Gives full details about "Leap's Prolific", now offered for 16th time, "Forward", "Trumbull", "Pennsylvania 44" and other heavy-yielding varieties. Written specially for wheat farmers by folks who know wheat. Write today.

A. H. Hoffman, Inc.
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When answering advertisements always state that you saw it in the Milk Producers' Review

NUTRITION — DIET — HEALTH

Correct Shoes For Your Health

A pinching shoe is many times responsible for a pinched face and a wrinkle in the shoe lining usually means a new wrinkle in the wearer's face. There is a close tie-up between the shoe we wear and the expression on our faces, and as a result, a beautiful shoe may not always mean a beautiful face.

Shoes that are too high-heeled throw the whole body out of position so that we do not have a graceful carriage. In the ideal standing posture a perpendicular dropped from the ear or just behind the ear would fall through the hip and ankle joints. It is easily seen how impossible this would be with the body thrown forward as the result of too high heels, and it is not only our posture that high heels affect, but our organs can be thrown out of position so long that they become virtually deformed and do not function right.

It is an interesting experiment to stand on any street corner and watch the crowds going by. So few people really walk gracefully. There are many hobblers, and many limpers and many stubbers—you have seen them all. Viewing the girl in spiked heels, we note an aching foot, then up along the aching leg muscles and the out-of-place spine to the very face of the girl herself, are seen little lines of pain that spoil her attempt to look beautiful. Real beauty depends first of all on comfort.

Here are some of the points to watch in choosing a good walking shoe. Among other things, shoes should not be too flexible or too thin-soled. If we could walk only on grassy earth, shod in soft-soled moccasins, many of us could be "straight as an Indian", with no arch troubles and probably no posture troubles. For walking on hard pavements, however, we need a fairly heavy sole.

There should be room for the toe to lie straight and slightly spread. Take plenty of time in fitting your shoes and be sure that they are comfortable. The right shoe should not need to be "broken in". A broad, low heel will help to keep your ankles from turning and prevent callouses on the ball of the foot. Just one pair of the wrong kind of shoes and you can build up years of foot trouble. How much simpler it is to choose the right shoe!

In bringing out these points when she talks to club girls, Mrs. Charles Sommers, of the National Dairy Council quotes one of the verses from "The Ode to Posture":

"The one who walks with grace and poise
Is a spectacle so rare
That even down on gay Broadway
The people turn and stare."
"The one who walks with grace and poise" is naturally the one with correct shoes.

Children who start school in good health have an advantage over those who are less healthy. Right now is the time to begin to get them up to weight and to take care of teeth and tonsils that need attention.

It doesn't pay to can fruit or vegetables at home to sell unless they can be sold at a price that pays for the labor as well as the materials used.

How Everybody Can Be in Style

"The finest materials and the most expensive dressmaker cannot dress up a girl with a poor figure so that she is really in style", says Miss Gladys Coon of the National Dairy Council in her talks to 4-H Club Girls. "The debutante slouch" has gone out long ago and the highest paid models in the Parisian establishments are those who have the trim, neat, almost military carriage."

The actresses who are paid fabulous sums by clothing manufacturers to pose for commercial advertising in their garments are those who have the right posture and bearing. There is a flair and dash which the model's good pos-

tures gives any garment worn. There is an old saying that "anything looks well on a galloping horse", but most of us can't go through life so fast that people all about us do not notice all the details of our appearance. Many a time and details may be all right and the costume carefully chosen but the complete ensemble is far from looking "up-to-the-minute".

Thinking over the people you know from the point of view of those who look well in their clothes, you will find that the ones you instinctively choose as being the most stylish are those who have the best carriage.



The Annual Meeting of the I. M. P. A. Hospitality Committee

The Hospitality Committee is planning to hold the usual annual meeting for the ladies on Monday morning, November 28, 1927.

The meeting has been held for the last three years at the time of the annual meeting of the I. M. P. A. This year the program will be even better than heretofore. Details will be printed in later numbers of the Review. The following ladies were appointed on the committee:—

Mrs. H. D. Allebach,
Mrs. R. W. Balderston,
Mrs. R. F. Brinton,
Mrs. C. I. Cohee,
Mrs. Fred Shangle,
Mrs. F. M. Twining,
Mrs. A. B. Waddington.

It isn't much more trouble to install a pump in the kitchen than in the back yard, but it means miles less walking for the housewife in the course of a year.

Food During Childhood Governs Condition of Teeth

The advent of the first permanent molar, at six, behind all the baby teeth, is the milestone that marks the passing from babyhood into childhood.

This tooth is very important because its acts as a keystone holding the dental arch in shape, while the baby teeth are being gradually replaced by the larger permanent teeth. This tooth has been quietly developing from birth up until this time and its strength and soundness will depend upon the diet that the child has had. This diet should include at least a quart of milk daily in some form to supply him with the much needed lime salts, sufficient hard foods for exercise, plenty of green vegetables and fruit with an unstinted amount of butter for the much needed vitamins "A" and "D". Vitamin "A" is growth promoting, while "D" is especially detailed to build bones.

If this tooth is lost before the 12-year molar appears, the continuity of the arch is destroyed and crooked teeth or a protruding jaw may result.

His food habits should be regular, with no eating between meals. Often a child is only thirsty when he thinks he is hungry. Give him plenty of water to drink at all times. Avoid having his lime storage depleted by constant use of candy, sweets and all the diseases of early childhood.

Every physical crisis in life takes toll of one's lime reserve and often the pitted unenameled teeth of adults may be traced directly back to faulty food habits and to those diseases which could have been avoided by a little extra care. During measles, whooping cough or any of these diseases the body calls upon all the available lime which seems to be the big mineral balance wheel to fight the disease. Too often there is not enough lime both to save the child's life and to supply building material for teeth.

One of the evils that attack teeth is known as caries—decayed spots in the tooth structure, and may mean the beginning of a long series of diseases which involve the general health.

Hard and well-formed teeth resist decay, while poor defective teeth crumble away. The quality of the hard tooth depends on the process known as calcification—beginning nineteen weeks before birth for the baby teeth, ten weeks before birth for the first permanent molars, and by the first year of age for all the rest of the permanent teeth.

This means that calcium (lime salts) must be supplied in sufficient amount to take care of the actual bone structure of the teeth and protect the individual from disease by building up a resistance. Your child must have a quart of milk daily, in some form, if he is to have all the lime that his growing body requires. Milk is our best source of lime. Green leafy vegetables are the second best source, but he would have to eat two heads of lettuce to give him as much calcium or lime as he would get in one glass of milk. He also should have vitamins from butter, fruit and fresh green vegetables, together with as much sunshine as possible in order that his body may utilize the calcium. The other requirement is hard foods which will exercise teeth, gums and jaws.

Every human being has obligations to society beyond the home, and the organized farm women are taking hold of community problems, which have long needed the dynamic, intelligent, and sympathetic interest of persons whose social conscience is active.—A. R. Mann.

Walter Johnson Attributes Baseball Success to Start on Farm

Walter Johnson, pitcher for the Senators, gave hundreds of boys and girls of the 4-H Clubs a big league thrill the other day in Washington when he described to them how it feels to be a national figure.

"Every day I get hundreds of letters from boys all over the country asking how they can become baseball pitchers," said Johnson. "I always answer every letter, but my advice is the same to all—even to my own two sons."

His audience slipped a little nearer the edge of their benches, waiting breathlessly for the next words of the player whose relief pitching in 1924 won the American League Pennant for the Senators and beat the New York Giants in the World's Championship. The following year Johnson again won the American League Pennant for his team. He now holds the record, after twenty-one years with the Senators, of pitching more shut-out games than any pitcher in the League.

"I think the thing that meant most to me as a youngster" said Johnson, "was the fact that I was born and raised in the country. We had a number of cows out on that Kansas farm, and I had plenty of milk to drink. We also had fruit and vegetables. You folks know that health depends in a large measure upon our food. Milk, fruit and vegetables gave me a good start."

Walter Johnson is at present living on a farm in Maryland outside of Washington. He has three cows, a fruit orchard and a vegetable garden, and says that he intends giving his sons the same opportunity which he had as a boy to build bone and muscle.

He considers the important essential for youth. "Your 4-H Clubs stand for the development of the head, the hand, the health and the heart, I believe. If you develop your health in the way I have told you, and keep away from the things which harm your body, you can more easily develop the other three H's. When you have a strong healthy body your mind will be keen and alert, and you are bound to make friends."

"After all," said the Washington baseball star, "Your health and success is all up to you."

Philadelphia Inter-State Dairy Council

General Offices

Boyetown Building, Philadelphia

A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value in nutrition.

Affiliated with the National Dairy Council

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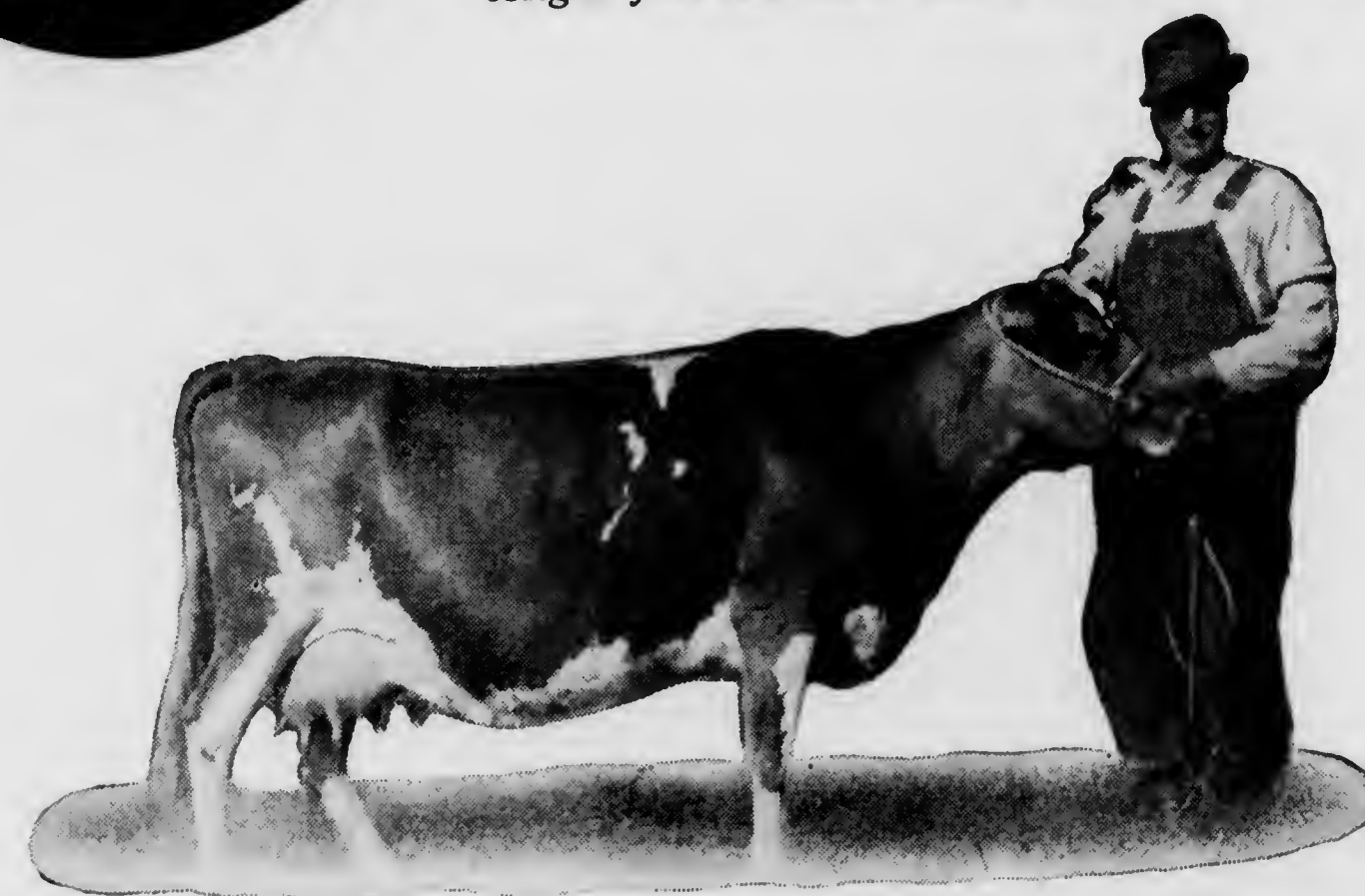
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The herd of Guernseys owned by F. E. Winn of Granton, Wis., has shown an annual increase in milk production for the last three years. He says the longer you use Cow Chow the better it repays you.



Here's an eleven-year-old of Mr. Winn's herd. He says Cow Chow keeps them looking like this—whether old or young.

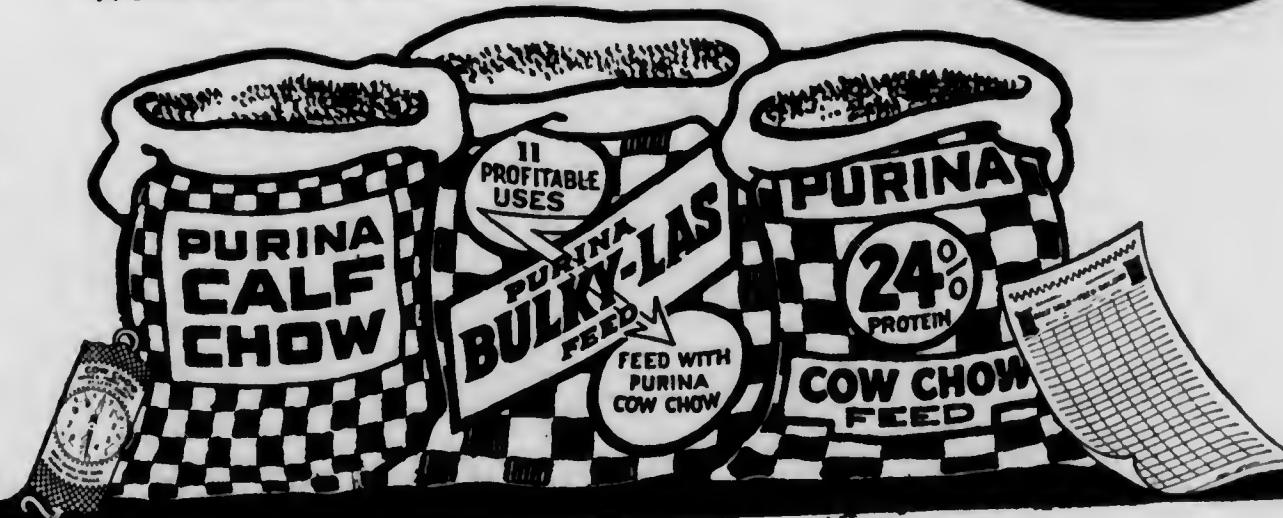
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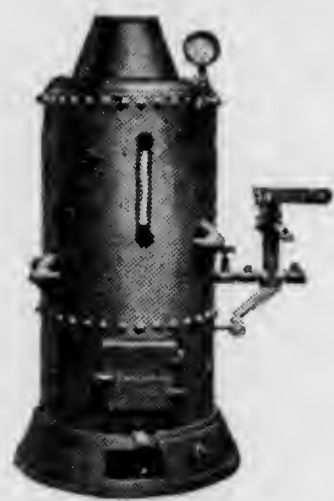
Philadelphia Inter-State Dairy Council

The various departments are at your service and will assist you in planning

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De Laval Separators and Dairy Needs—Poultry Feeds, Health Remedies and Accessories—Pumps, Hand and Power Systems Installed in Dwellings and Barns—Feed Mills, Cutters, Shellers, Farm and Garden Implements—Wire Fencing, for Lawn, Garden, Poultry Yards, Farm

School Yards, Tennis Courts, Erected under Contract

Farm, Vegetable, Grass Seeds of all Kinds—Seed Wheat, Leap's Prolific @ \$2.00 per Bushel—Seed Rye @ \$1.75 per Bushel—Timothy Seed @ \$3.00 per Bushel Add 50c for Cotton Bag

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Plan Now for Fall Marketing

Successful business organizations plan months ahead for how, when and where their products will be sold, says the State Bureau of Markets in suggesting that farmers begin now to plan for selling their fall farm, garden and orchard products.

"What plans to make depends upon the method of sale."

"If direct selling to consumers is followed, plans for keeping regular customers informed and for securing new customers are worth considering. When advertising space is to be used, it is well to be thinking about the papers

that will be selected, and the nature of the statement to be carried.

"When selling directly from the orchard or farm, time can be saved by planning ahead to place signs and posters at the roadside and other places to inform the public.

"When selling to jobbers, wholesalers or retailers, it is good business to make arrangements with them well in advance of the time when the products will be ready for marketing.

"Having an adequate supply of proper containers for taking care of the different types of trade is another mark of good business."

Some Observations on a Survey of Membership Problems of Four Large Cooperatives

(Continued from page 1)

really fall into about four classifications, expenses, methods of paying for milk on classification plan, and those due to lack of information.

"Locals" were mentioned by the members of one association as the principal source of information however, receiving first mention more than twice as often as the house organ.

Because of the fact that the house organ holds such high rank here and because I read the house organ of many different kinds of cooperative associations, I think I'll say that the editor should be intimately acquainted with the affairs of the association and primarily a teacher instead of primarily a newspaper reporter with a nose for news.

If the house organ of some associations is the principal source of information—and I shall assume that is the reason for its existence—I fear the members have no very definite information regarding the affairs of the organization. More space is devoted to "cooperative marketing" of other products than to information regarding their own associations. I can see how a farmer might "believe in" cooperative marketing and not care to belong to a particular association that gave little information about what the organization was really accomplishing for its members.

And so it seems to me that the editor of the house organ should teach the members to appreciate the services rendered by the organization as well as the economic principles underlying the limitations as well as the possibilities of the organization.

So much emphasis has been placed on price in some associations and so little is understood by some members regarding the factors that determine price that some questions were included to determine some idea of the members' economic thinking. One of the questions was "What should govern the price of milk?"

Two hundred seventy-six said "Cost of production" and three hundred twenty-six said "supply and demand." In one of these associations, however, less than half as many said cost of production as said supply and demand, while in two others more answered cost of production than supply and demand. In one association we asked members "what do you estimate is your cost of production per cwt. and only a very few had any idea.

(1) What Members Expect

Asso. No. 1 2 3 4
Total schedules 169 201 190 198
None 78 80 35 81
Don't know 28 52 75 56
Officers with dealers 10 10 10 10
Price changes 12 12 12 12
Basic surplus 7 7 7 7
Buying plants 14 14 14 14
Too many employed 16 16 16 16
Salaries too high 10 10 10 10
Not enough members 8 8 8 8
New payment plan 17 17 17 17
Deductions 30 30 30 30
Pool price 1 1 1 1

(2) Advantages

Asso. No. 1 2 3 4
Total schedules 169 201 190 198
None 102 25 80 35
Sure Markets 23 107 17 39
Protection wts. & tests 24 2 37
Convenience in trouble 6 16
Better price 3 20 19
Personal satisfaction 11 11
Sure pay 26 40
Don't know 1 7 27 27

(3) Non-Member Advantages

Asso. No. 1 2 3 4
Total schedules 169 201 190 198
None 129 93 33 99
Do as they please 8 28 20 10
Get more money 6 61 64 24
No expense or dues 27 8 37 17
Same advantages 2 5 12 10
Paid twice a month 2 9
Don't know 1 8 35 10

(4) What Should Govern Price of Milk

Asso. No. 1 2 3 4
Total schedules 169 201 190 198
Cost of production 44 74 80 78
Supply and demand 89 89 76 72
Quality control 12 12
Farmers or asso. 10 10
Both 15 15
Don't know 8 20 21 27

(5) Source of Information

Asso. No. 1 2 3 4
Total schedules 169 201 190 198
Locals 17 29 67 78
Organization paper 104 16 100 66
Directors and officers 27 15 5 22
Neighbors 9 11
Personal observation 3 4

(6) Criticisms

Asso. No. 1 2 3 4
Total schedules 169 201 190 198
Have none 97 148 51 118
Don't like surplus 13 3
Officers with dealers 29 29
Salaries too high 3 9
Tests and weights 4 7 2
Price 12 6
Deductions 6 6
Laziness 5 5
Overhead expense 9 9
Opposition 13 13
Lack of information 5 5
Outsiders 12 12
New payment plan 12 12

(7) Mistakes

Asso. No. 1 2 3 4
Total schedules 169 201 190 198
None 78 80 35 81
Don't know 28 52 75 56
Officers with dealers 10 10 10 10
Price changes 12 12 12 12
Basic surplus 7 7 7 7
Buying plants 14 14 14 14
Too many employed 16 16 16 16
Salaries too high 10 10 10 10
Not enough members 8 8 8 8
New payment plan 17 17 17 17
Deductions 30 30 30 30
Pool price 1 1 1 1

Crop Prospects for 1927

The crop prospects for 1927 show how a season that is decidedly unfavorable for some crops is extremely favorable for others, says the Penna. State Department of Agriculture in reviewing the estimates on the production of various crops this season.

For example, unless the weather is very favorable during early September the corn crop will probably be the smallest since 1909 while the hay crop, with one exception, will be the largest since the Civil War. Because of the unfavor-

able spring, the acreage planted to corn is the smallest since 1899.

The wheat crop will be about 3,700,000 bushels below the five-year average, 1922-1926, while the oats crop will be more than 2,000,000 bushels above the five-year average. The average of wheat is the smallest since the Civil War while the acreage in oats is the same as last year and only 12,000 acres under the average for the past five years.

The tobacco estimates indicate the smallest acreage since 1915 and the smallest production since 1908.

COW TESTING ASSOCIATIONS

Chester Valley Association

WARREN H. SHINGLE, Tester

The Chester Valley Association, during the month of July, had 26 herds on test with 465 cows in milk and 80 dry. Ten cows were on official test. Twelve unprofitable cows were sold during the month. Forty-eight cows produced over 40 pounds and 22 over 50 pounds fat. Thirty-five cows produced over 1000 and fifteen produced over 1200 pounds of milk.

Ten Highest Producing Cows in Butterfat for Month

Owner	Breed of Cow	Lbs. Milk	% Fat	Lbs. Butterfat
David Stolyfus	Gr. Guernsey	1891	4.2	78.5
C. E. Mather	Reg. Jersey	1308	4.9	64.1
Fairbank Beale	Reg. Jersey	1023	6.0	61.3
Ryckly and McFadden	Reg. Jersey	1187	5.1	60.5
Richard L. Fox	Gr. Guernsey	1264	4.8	60.0
C. Albert Fox	Gr. Jersey	1203	4.9	58.9
Whitford Farm	Reg. Guernsey	1209	4.7	56.8
Edward Hoopes	Reg. Jersey	812	6.8	55.2
C. Albert Fox	Gr. Jersey	859	6.3	54.1
Jos. Latta	Gr. Holstein	1525	3.5	53.3

Montgomery County Association

F. E. MARTIN, Tester

During the month of July, 25 herds were tested having 358 cows in milk and 47 cows dry. Thirty-eight unprofitable cows were sold during the month. Thirty-eight cows produced over 40 pounds of fat and 5 produced over 50 pounds. Fifty produced more than 1000 pounds of milk, while 29 went over the 1200 pound mark. Highest herd average milk production:

Owner	Breed	Cows in herd	Average Lbs. Milk
Ursinus College	Hol.	16	907
Schultz, East, Levi	Hol.	14	882
Allebach, H. D.	Hol.	14	852
Idlewild Farm	Mxd.	17	812

Highest herd average butterfat production:

Owner	Breed	Cows in herd	Average Lbs. Fat
Ursinus College	Hol.	16	30.7
Willow Creek Farm	Grn.	22	30.6
Schultz, East, Levi	Hol.	14	30.5
Allebach, H. D.	Hol.	14	28.9

The Honor Roll—with cows producing 40 pounds of fat or more during the month include: Wm. H. Landis, one cow; Wood & Sons, two cows; Warren Schultz, one cow; A. L. Bailey, two cows; Ursinus College, six cows; W. C. F. Randolph, two cows; A. K. Rothenberger, three cows; O. M. Woodward, three cows; H. D. Allebach, four cows; Willow Creek Farm, five cows; C. E. Longacre, two cows; Camp Discharge, two cows and C. E. Wismer, C. Wm. Haywood, Harry Bechel, Mrs. H. Biller and L. K. Haywood with one cow each.

Mifflin County Cow Testing Association

Yearly Average Records

The Mifflin County Cow Testing Association finished its fifth year August 1, 1926, with 21 whole year members. There has been a general increase in both milk and butter fat production during the time the Association has been in operation. It has been obtained by using better methods of feeding and also by disposing of the unprofitable cows in the different herds. There are 271 cows in the Association during all or part of the year.

Year	Ave. No. Cows	Lbs. Milk	Lbs. Butterfat
1921	7470	274.7	270.8
1922	6971	280.0	305.0
1923	7564	308.1	308.1
1924	180.74	8955	
1925	213.40	8955	

The results from the members is as follows:

Average No. of cows in the Association—213.40	Average per cow	Cost of Grain	56.03
Lbs. of milk	8955	Total Cost of feed	99.42
Lbs. of butterfat	308.1	Value of Product above feed cost	154.22
Percentage of butterfat	3.4	Returns for 81 exp. for feed	22.55
Value of Product	8253.74	Feed cost per 100 pounds of milk	1.11
Cost of Pasture	14.84	Feed cost per pound of butterfat	.32
Cost of Roughage	28.55		

2562 Tested Cows Give Half Ton of Milk Each

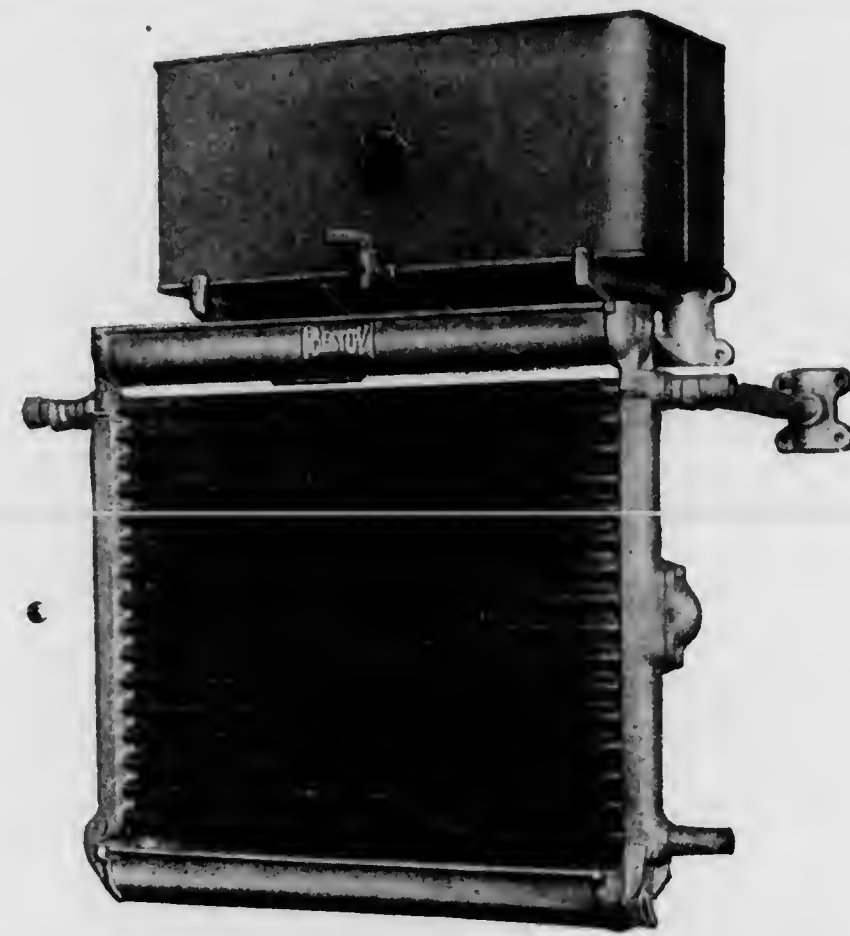
Forty-seven associations tested 16,216 cows during July, the Pennsylvania State College dairy extension service reports. Eighteen hundred and eighty-three of these animals produced 40 or more pounds of butterfat and 2562 passed the half ton mark in milk production. Of the 40 pounders 536 produced more than 50 pounds of fat while 1175 cows gave over 1200 pounds of milk.

Chester Valley Association in Chester County led in number of cows tested, with 545. The Warren Association tested 521. The Wayne Association had 103 of the 40-pound cows, which led all associations in the state, while Allegheny was second with 90. White Deer Valley Association led in number of 1000-pound milkers, with 131. Warren was second with 124.

Ivo V. Otto, of the Cumberland Association, had the best individual milker for the month, a registered Holstein which gave 2430 pounds. Other high individuals were registered Holsteins owned by H. A. Snyder, of the White Deer Valley group and W. M. Hunsberger of Middle Bucks, with 2427 and 2409 pounds respectively.

A registered Holstein, owned by Harry Wilkinson, of the Wellsboro Association, led in butterfat with 88.7 pounds. Other high individuals were a registered Holstein in the herd of W. H. Landis, of the Montgomery group, with 87.6, and a registered Guernsey on Homestead Farms in the Wayne organization with 84.8 pounds of fat.

Highest 10-cow averages in butterfat were achieved by Wayne, 67.7; Warren, 66, and Schuylkill, 63.9.



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Production of Clean Milk Requires Attention to Sanitation

The need for using improved methods in producing the public milk supply becomes more and more pronounced as time goes on, says R. J. Posson, associate market milk specialist of the United States Department of Agriculture. As cities grow larger or become more numerous the milk supply must necessarily be transported from greater distances and handled in larger quantities. To withstand such treatment it must be produced under the most sanitary conditions.

Furthermore, there is an increasing demand for clean milk on the part of the consumer, and health officials are requiring that improved sanitary methods be used in its production. Unless care is taken in producing it, therefore, great losses may result from the rejection of milk by dealers or health departments and from the lessened demand for low-grade milk. The responsibility for clean milk at the source is placed squarely on the shoulders of the milk producer.

By observing certain precautions clean milk can be produced with very little more effort than milk which is not clean. These precautions are discussed by Mr. Posson in Leaflet No. 3, Improved Sanitation in Milk Production, just issued by the department. The first requirement for clean milk is a herd of healthy cows. Once it is determined by test that the cows are free from tuberculosis and are otherwise healthy, pains should be taken to clean them thoroughly before they are milked. Wiping the udders with a damp cloth removes the danger of contaminating the milk by falling hair and dust particles. Since bacteria causes milk to sour they should be kept out of it by every possible means.

Further precautions in the production of clean milk require that only healthy people be employed in a dairy, that they wear clean clothing, and that milking be performed with clean, dry hands. The use of small-top pails is recommended as a means of reducing the amount of impurities that fall into the milk.

Every dairyman should be certain that he has a pure, safe water supply. Wells should be located on the highest available ground. A separate dairy house or milk room should be provided. Milk to be sold should never be handled in a dwelling as there is too much chance of dangerous contamination in case sickness occurs in the family.

Milk utensils which are not properly washed or sterilized may be the greatest source of contamination. They should be rinsed inside and outside with lukewarm or cold water as soon as possible after use, then placed in a wash vat, scrubbed with a brush in warm water containing a soda ash or alkaline washing powder (not soap), rinsed, placed in a sterilizing cabinet, and thoroughly steamed.

The best way to prevent multiplication of bacteria which unavoidably get into the milk is to cool the milk as soon as possible after it is produced and keep it cold. Bacteria are tiny single-celled plants, which, like most other plants, require warmth to grow. If milk is cooled to 50 degrees F. or below and held at that temperature, bacterial development is very much retarded. Milk should not only be kept cold until it leaves the farm but should also be protected from the sun and warm air while being transported from farm to city.

A copy of "Improving Sanitation in Milk Production," Leaflet No. 3, may be secured by writing to the United States Department of Agriculture, Washington, D. C.

Continued Progress in Eradicating Bovine Tuberculosis

A summary of tuberculosis-eradication work conducted by the United States Department of Agriculture in cooperation with various States shows excellent results during the fiscal year ending June 30, 1927. An outstanding achievement was the large increase in the number of entire counties which have completed the tuberculin testing of all cattle within their boundaries. The summary of progress shows 347 such counties distributed among 27 States. Thus, more than half of the States have one or more such tuberculosis-free counties. The three leading States in this respect are North Carolina with 22 counties on the modified-accredited list, Michigan with 42, and Iowa with 30 such counties.

On July 1 a total of 17,600,380 cattle in the United States were under supervision for the eradication of bovine tuberculosis. Besides this number considerably more than 4 million cattle are on waiting lists and will be tested as soon as the Federal, State, and county veterinary inspectors complete other work for those owners who signed up earlier for tuberculin testing.

The total number of cattle in herds fully accredited as free from tuberculosis exceeds 1,885,000. The work of tuberculosis eradication is going forward systematically in all States. During the last month of the fiscal year the inspectors engaged in tuberculin testing applied the test to more than 800,000 cattle, of which approximately 24,000 were found to be affected with the disease. The removal of such reactors from contact with healthy cattle, followed by the slaughter of diseased animals under Federal inspection, is gradually reducing the extent of bovine tuberculosis throughout the country and benefitting both the livestock industry and public health.

Report of the Quality Control Department of the Philadelphia Inter-State Dairy Council

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of July, 1927.

No. Inspections Made... 2340
No. Sediment Tests... 2113
No. Miles Traveled... 20,524

No. Temp. Permits issued up to July 31st, 1927... 23,226

No. Perm. Permits issued up to July 31st, 1927... 9,711

During the month 31 dairies were discontinued from selling for failure to comply with the regulations. Twenty-four were reinstated before the close of the month.

To date 77,979 farm inspections have been made.

What Folks Are Saying

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Report of the Field and Testing Department. Inter-State Milk Producers' Association.

The following statistics show the aggregate operations of all the Inter-State Milk Producers' Association field men in connection with testing, weighing and general membership work, for the month of July, 1927.

No. Tests Made... 6596
No. Plants Investigated... 97
No. Membership Calls... 276
No. New Members
Signed... 94
No. Cows Signed... 585
No. Transfers Made... 18
No. Meetings Attended... 6
No. Attending Meetings... 302

Soy-Bean Acreage in U. S. Now More Than 2,500,000 Acres

Although the soy bean came to this country many decades ago as an unknown immigrant, it only recently has won a recognized place in the cropping system of American farmers. Recent interest in the soy bean and its products together with the increased acreage devoted to it during the past decade indicate, according to W. J. Morse, forage crop specialist of the United States Department of Agriculture, that it is destined to become a crop of considerable economic importance in the United States.

In 1917 less than 500,000 acres were devoted to soy beans for all purposes. In 1924 there were 2,500,000 acres, of which about 1,000,000 acres were grown for hay, about 1,000,000 acres for pasture and silage, and more than 500,000 acres for seed production. About 2,288,000 bushels of seed were produced in 1917, while in 1924 nearly 10,000,000 bushels of seed and 1,360,000 tons of hay were produced. Although the increase in acreage has been general over the eastern half of the United States, the most marked increases have been in the Corn Belt States and in a few of the Southern States.

The soy bean can now be grown successfully in any climate suitable to corn or cotton, says Mr. Morse. The department during the past 10 years has developed, through introduction and by breeding methods, varieties which have extended the range of profitable soy-bean culture far beyond what were at first considered its limits. The principal uses of the soy bean are for hay, pasture, silage, grain, oil and oil meal, and human food. With such a wide range of uses the production of the soy bean is no longer localized and its increasing importance is assured.

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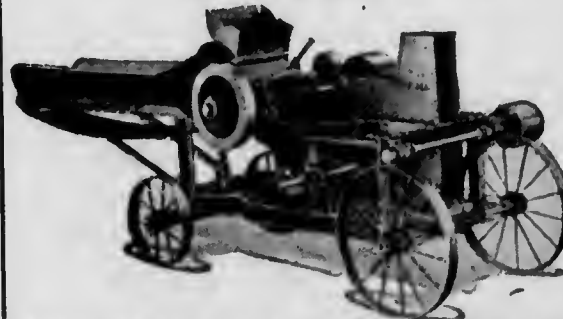
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Mr. Dave Fitzpatrick of Tillamook County, Oregon, and his grade Jersey, "Daisy." Mr. Fitzpatrick's splendid Jersey herd was high herd (20 cows or over) in the Tillamook County Cow Testing Association.



Aside from this fine achievement, a number of Mr. Fitzpatrick's individual cows made exceptional records in their various classes. This herd is milked entirely with the De Laval Milker.

Famous Tillamook Record-Making Cows Miked with De Laval Milker

Summary of 1927 Annual Report of Tillamook County (Oregon) Cow Testing Association

High Herds Over 20 Cows

Name	Address	No. of cows	Breed	Av. lbs. milk	Av. lbs. fat
*Dave Fitzpatrick	Tillamook	25	GJ	9,250	488
*Geo. W. Durrer	Tillamook	24	GG	9,937	452
*Paul Edmunds	Cloverdale	26	GJ&H	9,689	409

Of the 3 high herds of over 20 and under 20 cows, Ernest Leonnig's *17 Guernseys and Jerseys (milked with De Laval Milker) made an average of 9,603 lbs. of milk and 442 lbs. of fat.

Mature Cows Producing Over 575 lbs.

Owner	Cow	Lbs. Milk	Lbs. Fat	Breed
*Dave Fitzpatrick	Rose	15,085	803	GJ
*Dave Fitzpatrick	Daisy	19,235	712	GJ
*E. Leonnig	Blackie	13,954	669	GJ
*Joe Kagi	No. 70	13,846	634	GJ
*Stasek & Aufdermauer	Minnie	9,215	558	GJ
Paul Edgar	Allie	10,229	576	GJ

Four-Year-Old Cows Producing Over 500 Lbs.

Owner	Cow	Lbs. Milk	Lbs. Fat	Breed
Paul Edgar	Anita	11,715	694	GJ
*E. Leonnig	Flower	11,461	597	GG
Learned Bros.	Trouble	13,455	585	GH
*Geo. Durrer	Rose	10,911	563	GJ
*Crenshaw Bros.	Nellie	9,036	554	GJ
*E. Leonnig	Blanche	9,355	522	GJ
*D. Fitzpatrick	Daffadil	9,721	521	GJ
*Paul Edmunds	Molly	10,465	518	GJ

Ten High Three-Year Olds Producing Over 400 Lbs.

Owner	Cow	Lbs. Milk	Lbs. Fat	Breed
*G. W. Durrer	Holly	16,250	569	GH
*G. W. Durrer	Pearl	9,950	543	GJ
*G. W. Durrer	Goldie	10,017	494	GG
*Joe Kagi	No. 39	9,879	494	GJ
*T. B. Hyder	Snoop	8,567	493	GJ
Stephen Steiner	No. 12	10,255	483	GJ
Bohren & Kiger	Lillie	13,305	464	RH
W. B. Vaughan	Bess	12,792	462	GH
L. S. Hushbeck	Cricket	8,442	452	GJ
Ben Jacobs	Dot	7,739	438	GJ

Ten High Two-Year Olds Producing Over 350 Lbs.

Owner	Cow	Lbs. Milk	Lbs. Fat	Breed
A. Leuthold	Linda	9,461	537	GG
*D. Fitzpatrick	Pansy	9,206	526	RJ
*D. Fitzpatrick	Pearl	8,829	477	GJ
*E. J. Gienger	Pet	10,430	468	GG
Leo Sanders	Red	10,031	448	GG
*Tom Hyder	Burbank	9,314	445	GG
L. S. Hushbeck	Brownie	7,990	442	GG
Frank Blaser	St. Mawes Pansy	9,037	440	RJ
*E. J. Gienger	Katie	8,411	423	GG
L. S. Hushbeck	Star	7,711	414	GJ

*All cows marked with star were milked by the De Laval Milker.

Report Shows that High Record Makers Use the De Laval Milker

1. All of the high herds of 20 cows or over were milked with the De Laval Milker.

2. Five out of six of the mature cows producing over 575 lbs. of fat were milked with the De Laval Milker.

3. Six out of eight of the 4-year-olds producing over 500 lbs. of fat were milked with the De Laval Milker.

4. Five out of ten of the 3-year olds producing over 400 lbs. of fat were milked with the De Laval Milker.

5. Five out of ten of the 2-year-olds producing over 350 lbs. of fat were milked with the De Laval Milker.

6. The average production of the 1,306 cows tested during the year was 8,388 lbs. of milk and 359.39 lbs. of butter-fat.

Could stronger, more convincing evidence than this be offered of the superiority of the De Laval Milker?

Tillamook County, Ore., has the well-merited reputation of being one of the finest and most progressive dairy sections in the world. The fact that De Laval Milkers are aiding its best cows to establish greater records is an argument that should not be overlooked by a single dairyman.

Write to the office listed below that is nearest to you, or ask your local agent for complete information concerning the De Laval Milker—truly the "Better Way of Milking."

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Milk Producers' Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

Volume VIII

West Chester, Pa., and Philadelphia, Pa., October, 1927

Number 6

Philadelphia Enforces Temperature Regulations

For some time the Board of Health of the City of Philadelphia has been insistent in the enforcement of Rule 5, of its code of Rules and Regulations concerning the temperature at which milk must be cooled to insure its approval in the city. This reads as follows:

Rule 5—Milk and Cream Standards, Quality and Temperature, provides that "No person shall sell or transport any milk which contains more than 88 per centum of water, and less than 12 per centum of milk solids, and less butterfat than 31 per centum; or any cream which contains less than 18 per centum of butterfat, or any milk or cream whose temperature, except during the process of pasteurization, is higher than 60° F. That we therefore rigidly insist upon the cooling of direct-shipped milk, eliminating from the market milk which is not cooled to at least 70° and, if possible, 65°, at the time of loading. That we insist upon trucks being so constructed as to properly

Particular attention has recently been given to that portion of the regulations relating to the temperature of the milk as it has been found that milk shipped by automobile truck to Philadelphia plants of buyers has in many instances exceeded the required temperature and has resulted in a closer observance of the regulation by the Board of Health.

This has resulted in a number of dairymen having their milk rejected and returned to them, thus causing not only loss of milk but needless hauling expenses. The Philadelphia Board of Health states that if dairymen persist in shipping milk not properly cooled as required by the regulations, that such milk so returned will be rendered unfit for use by the addition of junket, or other substances.

Under the general sanitary regulations of the Philadelphia Inter-State Dairy Council, approved by the Inter-State Milk Producers Association, Section E, No. 1, reads,

Milk must be removed as soon as drawn, to a clean place and be cooled within an hour to as near 60 degrees as is practicable with the facilities available.

In order that the producers of milk may be in line with the rules and regulations of the Board of Health of the city of Philadelphia, and may not suffer any loss by the rejection of their milk when delivered in the city, the directors of the Philadelphia Inter-State Dairy Council, at a meeting held in Philadelphia, September 21, 1927, after a full discussion of the subject passed the following resolution:

"That we call attention to the Department of Health of Philadelphia Rule No. 5 in 'Rules and Regulations of the Board of Health Governing the Sale of Milk and its Fluid Derivatives in the City of Philadelphia' which states that 'no person shall sell or transport any milk or cream whose temperature except during the process of pasteurization is higher than 60° F.' That we therefore rigidly insist upon the cooling of direct-shipped milk, eliminating from the market milk which is not cooled to at least 70° and, if possible, 65°, at the time of loading. That we insist upon trucks being so constructed as to properly

The Truth Hurts Says National Dairy Council

As a result of the regular summer activity of the National Dairy Council in scheduling exhibits of scientifically fed experimental rats at state and county fairs, in store windows and other strategic locations throughout the middle-west, an organized defense is under way, sponsored by Margarine Manufacturers to offset the inroads on public opinion which these exhibits create against margarine.

For many years the National Dairy Council has maintained an experimental animal station near St. Paul, Minnesota. White rats, chickens, dogs and pigs, raised in pairs of the same age, sex and

licity is considered, that the margarine manufacturers should become alarmed. Reports have come to the National Dairy Council of a concentrated effort on the part of these manufacturers to put the "quietus" on this source of information to the general public, particularly in the middle-west. Letters are being sent to state and county fair managers and others whom the "oleo" people expect to be responsible for the display of this exhibit showing what butter will do that margarine cannot. Direct contact through the local representatives of margarine manufacturers are beginning to result in pressure

brought to bear on business men and fair managers, calling upon them to stop the spread of what they seem to regard as effective against their business.

To show how effective these exhibits have been against the margarine sales in localities where people have been informed, surveys have been made of the market situation by local county agents in a disinterested capacity. At Indianapolis, Iowa, Claude S. Halderman, County Agent of Warren County, made a partial check on the amount of butter and oleomargarine sold by local merchants in Indianapolis the week previous to the showing of the experiment at the county fair and another the week following.

Cuts Sales Almost in Half "I found," reports Mr. Halderman, "that there were approximately 2½ pounds of oleomargarine sold thru the merchants to every pound of butter. It was interesting to find that the merchants are selling now only 1½ pounds oleomargarine to every pound of butter."

Veiled threats are being made by representatives of the Institute of Margarine Manufacturers, directed at those whom the "oleo" interests believe are responsible for the exhibits in various localities. To one county fair board, the Institute has written that: "this Institute trusts that it will not have to resort to any other means to stop such false advertising of its products. It does not feel like spending time or money to prevent such an exhibit, but it must protect at any cost an industry authorized by law to manufacture and sell this wholesome product. . . . The members of this Institute respectfully and vigorously protest against the exhibition of sick rats or other sick animals in connection with oleomargarine and butter. Food is made to eat. It builds up body tissue. It also furnishes the body with energy. Food does not produce disease. It does not

(Continued on page 11)



New Dairy Barn being built by W. E. Thompson, President of the Nassau (Delaware) Local of the Inter-State Milk Producers' Association. The old barn was destroyed by fire. New Silo in course of construction at the right of the new barn

ly haul the milk and that icing of the trucks in the summer months be absolutely required.

As rapidly as possible, that we begin a systematic check-up of the temperatures of milk delivered at receiving station doors, much of the night's milk delivered at receiving stations being insufficiently cooled."

At the immediate time the examination of the various trucks delivering milk into the city of Philadelphia is being closely observed. Milk from Receiving Stations, being previously cooled has been largely under the required temperature, but the quality of the milk has been impaired by the receiving of milk the temperature of which has been too high.

Every milk producer should cool milk as quickly as possible, to the lowest possible temperature available for shipping to receiving stations in order that the safe keeping of the milk may be insured.

This resolution was referred to the Quality Control Department of the Philadelphia Inter-State Dairy Council.

breeding have been raised on special diets to show the advantage of milk and butter as necessary food in a proper diet for growth and health. The diets are prescribed and supervised by a leading nutrition authority of the University of Minnesota.

Exhibits Are Widely Used Each year an increasing volume of inquiries have taxed the capacity of the experiment station to supply these animal exhibits. One of each pair of animals has been fed on a basic diet plus butter and another fed on the same basic diet plus margarine. Anyone familiar with the difference in food value of these two products can predict the results which follow. The surprising fact about these experiments has been that in hundreds of cases the same diets have produced almost identical effects on the animals.

"Butter Made the Difference" is the slogan in large letters which always catches the eye over these exhibits.

"Oleo" Manufacturers Object It is not surprising, when the cumulative effect of this wide spread pub-

Dairy Sires Now Proved Through Dairy-Herd-Improvement-Association Records

Dairy-herd-improvement-association records are now being used to determine the true value of dairy sires as well as to test cows for economical production. Dr. J. C. McDowell, dairy husbandman, and Mr. W. E. Wintermeyer, associate dairy husbandman, Bureau of Dairy Industry, United States Department of Agriculture, have made an exhaustive study of the available association records and have drawn some striking conclusions concerning the use of proved sires in herd improvement.

In Circular No. 3-C, entitled "Proved Dairy Sires", just issued by the department, the authors discuss the influence of dairy sires on the production of their daughters, comment on the problem of keeping the bulls until their value has been determined through the records of their daughters, and point out the economy in the use of feed by high-producing cows.

Up to the present time, about 270 dairy bulls have been proved by comparing the records of five or more daughters of each sire with the records of the dams of the daughters. A much larger number of sires has been partially proved through a comparison of the records of a smaller number of daughters with the records of their dams.

A comparison of 5,217 association records of daughters with those of their dams shows a gain of 3.9 per cent in milk production and 5.1 per cent in production of butterfat by the daughters over their dams. This indicates that the herds in dairy-herd-improvement-associations are gradually being improved through the sires now used, but they might be improved much more rapidly if intelligently selected proved sires were used in every herd. For example, the daughters of 250 proved bulls excelled their dams by 7.2 per cent in milk production and 10.9 per cent in butterfat production. These gains are about twice as great as those made by the 5,217 daughters of average association sires. In both cases the dams were about equal in production, above 8,700 pounds of milk and above 350 pounds of fat. Sires mated with cows of average production, that is, with cows producing about 4,500 pounds of milk and 180 pounds of butterfat increased the production of the daughters by more than 60 per cent in both milk and butterfat.

Only the best proved sires can be relied on to increase the production of daughters over that of dams having a yearly production of 400 pounds of butterfat. The average dairy herd may double its production in two or three generations by the use of good proved dairy sires.

High-producing cows are economical in the use of feed, say the authors. A tabulation of more than 100,000 individual-cow records showed that the cost of feed for cows producing 9,000 pounds of milk a year per cow was only about 40 per cent more than for cows producing but half as much.

A copy of the circular may be obtained by writing to the United States Department of Agriculture, Washington, D. C.

Whitewash Should Stick

One ounce of alum added to a gallon of lime whitewash increases its adhesive quality. Flour paste answers the same purpose, but a preservative, such as zinc sulphate, should be added.

Exposition Will Provide Short Dairy Course

Demonstrations, Judging, Talks, Great Educational Features

Dairy cow demonstrations by experts, judging of cattle and dairy products by farmers and students, talks by authoritative speakers on successful dairying methods and the exhibit of the U. S. Department of Agriculture will provide a complete short course in dairying at the National Dairy Exposition-Tri State Fair at Memphis, Tenn., Oct. 15-22, a review of the program reveals.

"This educational program will be worth a trip of hundreds of miles to the dairy cow owner" said Prof. C. L. Blackman, of the Ohio State University, who is in charge of the demonstrations. These will be held twice each day.

Grade cattle will be demonstrated in the mornings and pure breeds in the afternoon. All five dairy breeds will be analyzed.

Governor F. O. Lowden, president of the Holstein-Friesian Association, Robert Scoville, president of the American Guernsey Cattle Club, Col. A. V. Barnes, president of the American Jersey Cattle Club, Leonard Tufts, president of the Ayrshire Breeders' Association and Prof. B. H. Hibbard, president of the Brown Swiss Cattle Breeders' Association will make brief talks on the days the demonstrations in their respective breeds are held. Dairy cattle experts will show the farmers how stock should be selected for dairy purposes. Results of the Arkansas Experiment at the Iowa State College on the upgrading of cows by using pure-bred bulls will be graphically pictured and explained in detail, with the results obtained.

Farmers judging contests will enable the unschooled dairy farmer to test his knowledge of dairy cattle that he might learn in what respects he is deficient. In dairy cattle and dairy-products judging contests vocational students and 4-H boys and girls will be given an opportunity to learn the extent of their knowledge. Other educational features will be provided so that the trip to the Exposition will be highly profitable to the farmer with one cow or a herd.

Important Regulations Adopted for Hog Cholera Control

Important regulations were adopted by the Bureau of Animal Industry, Pennsylvania Department of Agriculture, effective September 1, for the control of hog cholera.

Two important features of the regulations are: All hogs coming into Pennsylvania for purposes other than immediate slaughter must be vaccinated. Likewise, all unvaccinated swine that have been in the possession of livestock dealers or others for less than 30 days and are offered for either auction or private sale for purposes other than immediate slaughter must be vaccinated.

These regulations have been made effective, not because of any present serious outbreaks of hog cholera within the State, but to give the swine industry every possible protection by preventing the introduction of the disease from other states and the spread of it within the Commonwealth.

Persons interested in securing all the details should write to the Bureau of Animal Industry at Harrisburg, for a copy of Regulation No. 524.

Tenant Farmers as Cooperators

Tenant farmers have played a larger part in the agricultural cooperative movement than has been generally supposed. It has seemed reasonable to assume that where capital investments in creameries, cheese factories, grain elevators, fruit packing plants, etc., were required it would be the owners of farms who would be the cooperators, and this is probably the case, although recently released data indicate that the tenant farmer has been a large factor in furnishing the products to be marketed cooperatively and in taking the commodities purchased cooperatively.

It has been appreciated that in the Southern States where the tenant farmer is as important numerically as the owner farmer the cooperative associations would have large numbers of tenants included in their memberships. Data collected by the Bureau of the Census as part of the census of agriculture, 1925, indicate that in a number of the Northern States more than one-third of the farmers belonging to cooperatives for selling farm products are tenants, and more than one-fourth of the farmers engaged in cooperative buying are tenants.

The percentage of farmers engaged in cooperative selling who are tenants varies widely for the different states. In New England the figure is less than 7 per cent; while in New York it is more than 15 per cent; in Michigan, more than 17 per cent; and in Indiana, more than 30 per cent. In some of the other states the percentages of tenants among the farmers selling cooperatively is as follows: Missouri, 24; Minnesota, 29; North Dakota, 29; Kansas, 39; South Dakota, 41; Nebraska, 43; Iowa, 44; Illinois, 46; North Carolina, 30; South Carolina, 43; Mississippi, 50.

The percentage of cooperators who are tenants is under 30 for most of the Mountain States, except for Colorado, where it is 43. For California the percentage is but 5, and for Washington, 12.5.

In most states the percentage representing tenants among farmers buying cooperatively is smaller than that of farmers selling cooperatively. California, however, is an exception, as 8.7 per cent of its farmers doing cooperative purchasing are tenants, while but 5 per cent of its farmers engaged in cooperative marketing are tenants.

A Primer in Cooperation

Most of the current farm relief proposals rely to a greater or less degree on a broad expansion of cooperative marketing practice. It is generally recognized that cooperation, to be successful, must build from the bottom up, from the individual farmer to the local, district, and perhaps national cooperative association. Producers wishing to familiarize themselves with elementary principles of cooperation may find a helpful and simple discussion in Department of Agriculture Circular 409-C by Chris L. Christensen of the Bureau of Agricultural Economics. Mr. Christensen discusses and analyzes different types of cooperative organizations and their distinctions from commercial concerns, the membership relations and means for controlling marketing contracts, the financing of the cooperatives and of the crops, the management and obligations of the trustees, and the selling programs as effected by the type of product handled and the scope of the association.

Tuberculin Test of Dairy Cattle in New Jersey

New Jersey Department of Agriculture

Due to the passage by the last New Jersey Legislature of a law requiring that after January 1 next, all milk offered for sale must be either from tuberculin tested cows or pasteurized, a rush of inquiries regarding the tuberculin test and requests for this service are reaching the State Department of Agriculture. A report received from that Department also reveals the fact that of the 156,000 dairy cattle in the state, approximately 50,000, or 31½ per cent, have been tested by the State and Federal Departments of Agriculture and are known to be free from tuberculosis.

Danger of transmitting the disease to human beings through the consumption of milk from tubercular animals, together with the very large economic loss which bovine tuberculosis entails annually, makes this one of the most important of the services rendered by the government. It is estimated that the financial loss from this one source amounts to more than \$40,000,000 annually in this country.

Only through the tuberculin test can the disease be determined with any degree of accuracy, and this method has been in use by the State and Federal Departments for many years. The New Jersey Legislature has made an annual appropriation of \$100,000 to indemnify owners of reacting animals, while approximately \$60,000 is allotted to New Jersey for this purpose by the Federal Government. However, this year there has been such a large increase in applications for the work that it is believed these sums will be exhausted long before the close of the fiscal year next June.

Another cause for the unusual demand for testing is the passage of an act by last year's Legislature known as the "area test" law. This enables a municipality, township or county to have testing done on an "area" basis. After the disease is reduced to one-half of one per cent of the animals within the area, and certain other requirements have been met, the district is placed upon the Federal "modified accredited" list, insuring a better market for milk and increasing the demand for these healthy breeding and dairy animals. Cape May and Atlantic counties and four townships in Cumberland County have made application for testing under this plan and the first test of nearly all the area has been completed.

To meet public demand for information, a circular has just been issued by the State Department of Agriculture at Trenton. It gives information regarding bovine tuberculosis, the way it is spread, the menace to children, the use of tuberculin in making tests, the possibilities of control and the operation of the area test law. This circular, which is No. 116, is entitled "Facts about Bovine Tuberculosis" and will be sent free of charge to anyone requesting it.

House Farm Machinery

Open air machine sheds never have proved profitable. Rust spells loss, depreciation, inconvenience. A good tool shed will keep your machines clean and your own temper even.

Water buckets in the dairy barn pay for themselves quickly, for the cows will produce more milk.

OFFICIAL NOTICE ELEVENTH ANNUAL MEETING OF THE STOCKHOLDERS OF THE

Inter-State Milk Producers' Ass'n Monday and Tuesday, November 28th and 29th, 1927

At the Benjamin Franklin Hotel
9th and Chestnut Streets, Philadelphia, Pa.

BUSINESS SESSION, MONDAY AT 10.00 A. M.

In accordance with the By-Laws, the Stockholders of the Inter-State Milk Producers' Association will meet at the Benjamin Franklin Hotel, 9th and Chestnut Streets, Philadelphia, Pa., Monday morning, November 28th, 1927, at 10.00 A. M., for the purpose of filling vacancies in the Board of Directors, Hearing Reports of Officers and for the transaction of such business as may be necessary.

H. D. ALLEBACH, President
R. W. BALDERSTON, Secretary

PROGRAM

10.00 A. M.	Election of Directors Reports of Officers and Auditors Report of Testing Department	2.00 P. M.	President's Annual Address Discussion of Market Conditions
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SPECIAL ENTERTAINMENT FOR THE VISITING LADIES

Beginning at 10.00 A. M.

At Association Headquarters, Boyertown Building, 1211 Arch Street, Philadelphia

ANNUAL BANQUET

Benjamin Franklin Hotel

NOVEMBER 28th, 1927, at 6.00 P. M.

11th Anniversary Program Special Entertainment New Dairy Council Plays
BANQUET TICKETS \$2.50

TUESDAY, NOVEMBER 29th, 1927

8.00 A. M.	Visits to Local Milk and Ice Cream Plants Visits to Offices of the Inter-State Milk Producers' Association and Philadelphia Inter-State Dairy Council.	10.30 A. M.	General Public Session. Addresses—Details as to speakers in next issue of the Milk Producers' Review.
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PROXY FOR STOCKHOLDERS INTER-STATE MILK PRODUCERS' ASSOCIATION INCORPORATED 1917

REGISTERED
WITH
CORPORATION TRUST COMPANY OF AMERICA
WILMINGTON, DELAWARE

PROXY STOCKHOLDERS' MEETING

Know All Men by These Presents,

That I, the undersigned, being the owner of

shares of the capital stock of the corporation above named, do hereby constitute and appoint
my true and lawful attorney in my name, place and stead, as my proxy, at the annual meeting of the stockholders of the said corporation to be held in the Benjamin Franklin Hotel, 9th & Chestnut Sts., Philadelphia, Pennsylvania, on the Twenty-eighth day of November, 1927, and on such other day as the meeting may be thereafter held by adjournment or otherwise, according to the number of votes I am now or may then be entitled to cast, hereby granting the said attorney full power and authority to act for me and in my name at the said meeting or meetings, in voting for directors of the said corporation or otherwise, and in the transaction of such other business as may come before the meeting, as fully as I could do if personally present, with full power of substitution and revocation, hereby ratifying and confirming all that my said attorney or substitute may do in my place, name and stead.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this

day of

, 1927.

Witness:.....(Seal)

.....(Seal)

INTER-STATE MILK PRODUCERS' REVIEW

Official Organ of the Inter-State Milk Producers' Association, Inc.

August A. Miller, Editor and Business Manager
Frederick Shangle, Advertising Manager
Published Monthly by the Inter-State Milk Producers' Association, Inc.

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Entered as second-class matter, June 8, 1920, at the post office at West Chester, Pennsylvania, under the Act of March 3, 1879.



October, November and December, are the so-called basic months in the Philadelphia Milk Shed. These months are those which have been agreed upon by the Association and cooperating dealers for the establishment of basic averages upon which payment will be made during 1928.

The method for computing the basic quantities of producers will be as follows:

The basic quantity which has been established by each milk producer during 1927 will be added to the average quantity produced during October, November and December of this year and the total of these two amounts divided by two. The result of the division will be the established basic quantity of each producer to be used during 1928.

Special provision for such cases as new producers and tenants moving from one farm to another, or for those producers who are going through the tubercular test have been noted in recent issues of the "Milk Producers' Review". The Inter-State Milk Producers' Association has asked its locals to hold meetings for the discussion of this matter and the clarification of the minds of all members with respect to its details.

The central office of the Inter-State Milk Producers' Association must be promptly informed of any special case which needs individual attention.

The decline in general price level still continues. The country on the whole is enjoying an era of prosperity, which has lasted, with only brief interruptions since late 1922. Our national income is nearly three times as great as it was just before the war.

It is becoming apparent that protracted prosperity during a period of declining commodity prices produces the keenest kind of business competition. This is an unexpected development for we have never previously experienced a long period of prosperity during which the general level of commodity prices persisted in declining, says the Cleveland Trust Company in a recent issue of its Business Bulletin.

Apparently in industry, high profits are being maintained mainly by reduction costs and by increased efficiency in production and marketing. Agriculture is not alone in having to meet a declining price level and agriculture like in-

dustry seems to be meeting the situation by the same means.

This is particularly apparent in the dairy industry where producers have for some time been following the program of better production methods. Producing more milk with a smaller number of cows and by means of definite feeding programs and the introduction of better cows, better bulls and scientific methods of production and handling of their product. The elimination of the "boarder cow" is a dominant program for profitable milk production and the method means money for the producer.

Within two months from the time of mailing this issue of the Milk Producers' Review—in fact on November 28th and 29th, the Eleventh Annual Meeting of the Inter-State Milk Producers' Association, will be held. It will convene at the Benjamin Franklin Hotel, in Philadelphia.

Every Local unit of the Association should be represented by accredited delegates—and as many as possible of the membership at large should also arrange to attend these meetings.

Here will be presented the reports of your officers. Here will be discussed the dairy problems of the day and the programs for the future. It is every members meeting. The privilege of the floor is yours.

Eight Directors will be chosen to succeed those whose terms have expired.

Outstanding speakers will be heard on cooperative problems of the day and then do not forget the Annual Banquet—at which time the Philadelphia Inter-State Dairy Council will present some new features for your entertainment.

This meeting is one that deserves your attention. Make your plans accordingly and arrange to attend.

We have not become accustomed to it yet and we do not believe we ever will—but at least it is over now until next summer.

Daylight saving, so called, closed the 1927 season on September 25th, and now we can get back to business again in the old fashioned way.

We must reiterate—why change the clocks at all? If you want more daylight in the evenings for recreation—that means for the city folks and not the farmer—just begin work one hour earlier and stop one hour earlier. In other words begin at 8 o'clock instead of 9 o'clock and stop at 4 o'clock instead of 5 o'clock. It will save tampering with the clocks and avoid confusion.

As to the farmer—he begins his summer work at daylight and closes with sundown—when he can get enough help to do so and they are willing to adjust themselves to country conditions.

City time and country time do not mix—the cows, chickens and other livestock on the farm have their own schedule and no law or regulations can make them change it. They work on "sun time" and so should the clocks.

Tells How to Feed Cows

To provide dairy farmers with practical information about feeding a handy, pocket-size circular, "Feeding the Dairy Cow," has been prepared by the Pennsylvania State College agricultural extension service. It contains 28 pages of the latest recommendations and shows what different ratios to use. It may be obtained free upon application to your county agent or by writing to the Agricultural Publications Office, State College, Pa.

MARKET CONDITIONS

With the closing of the vacation season, the consumptive demand for fluid milk and cream, has, particularly in the larger cities, shown the marked increase usual at this time of year. The supply of basic milk now more closely represents the current demand. Under these conditions the market has cleared up most of the floating supply and the general situation has a decidedly improved appearance.

In most sections of the Philadelphia Milk Shed, production has continued to be favorably influenced by weather conditions. With others the season has been about normal. Pasture is exceptionally good for the season.

The illumination of the customary increase of 15 per cent in the basic amount of milk shipped during September, as previously announced in these columns, has done much to stabilize conditions, which have at present just about reached the normal stage.

Under the Philadelphia Selling Plan, producers of milk, will, during October, November and December, 1927, establish the usual basic averages. The average during these three months will be added to the present basic amount and the total of these, divided by two, will represent the basic average for 1928. Special provisions for new shippers, those whose herds have been inspected by the tubercular test, have already been printed in recent issues of the Milk Producers' Review.

September Milk Prices

Grade B market milk, three per cent butterfat content (basic quantity average), delivered f. o. b., Philadelphia, during September is quoted at \$3.29 per hundred pounds.

The price of basic milk (basic quantity average), three per cent, butterfat content, delivered at Receiving Stations, in the 51-60 mile zone, during September is quoted at \$2.71 per hundred pounds. The usual butterfat differential and freight rate variations applying at other mileage points in the territory, are shown by quotations on page 5. in this issue of the Review.

The price for Class I surplus milk, for September, three per cent butterfat content, at all Receiving Stations, is \$1.77 per hundred pounds. For f. o. b.

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of August, 1927.

No. Inspections Made... 1,983
No. Sediment Test... 3,143
No. Meetings Held... 10
No. Reels of Movies... 3
Attendance... 5,978
No. Miles Traveled... 23,267
No. Man Days, Fairs and Exhibits... 2
No. T e m p. Permits issued up to August 31st, 1927... 23,576
No. P e r m. Permits issued up to August 31st, 1927... 9,871

During the month 106 dairies were discontinued from selling for failure to comply with the regulations—58 of which were reinstated before the month was up.

To date 79,962 farm inspections have been made.

Philadelphia delivery, this price is quoted at \$2.34 per hundred pounds, or 5.05 cents per quart.

Dairy Feeds

Prices of dairy feeds have been practically unchanged. The price of ready mixed feeds, on the whole, have been somewhat higher than last month, but it is difficult, at this time to indicate the trend in the near future.

September Butter Market

Total stocks of butter reported in cold storage on September 1st were 163,037,000 pounds, an amount some 7,000,000 pounds greater than the report on September 1 1924 and approximately 25 million pounds greater than stocks on hand September 1st of last year.

The tendency toward a heavy accumulation of butter stocks has been evident throughout the entire season and the unusual surplus over previous years is not entirely unexpected as trade estimates based upon current information available for the more important storage centers were close to the reported amount. There was therefore no noticeable change in the market from the general price tone, which has prevailed since the early part of August.

Markets in fact, have actually firmed up as the month has proceeded although it must be pointed out that this applies especially to fancy grades than it does to some of the less desirable qualities.

After a slight hesitancy in prices during the early days of the month, there has been a definite upward trend throughout the month, and this in the face of increased storage holdings as compared with last year and reported lighter consumption.

The month opened with 92 score butter, solid packed, New York City, quoted at 44 1/2 cents. A slight upturn, followed by a decline, showed the same quotation at the end of ten days. A definite upward trend followed with prices reaching 49 cents at the close of the month.

The average price of 92 score, solid packed butter, New York City, on which the September surplus price was computed to be 4582 cents per pound as compared to 4161 cents per pound one month ago.

Statement of the ownership, management, circulation, etc., required by the Act of August 24, 1912, of the Inter-State Milk Producers' Review, published monthly at West Chester.

Editor, August A. Miller, Brookline, Delaware county Pa.; Business Manager, August A. Miller, Brookline, Delaware county Pa.; Advertising Manager, Frederick Shangle, Trenton, New Jersey; Publisher, Inter-State Milk Producers' Association, Philadelphia, Pa.

Owner: (If a corporation, give its name and the names and addresses of stockholders holding 1 per cent. or more of total amount of stock. If not a corporation, give names and addresses of individual owners.) Inter-State Milk Producers' Association, H. D. Allebach, Trappe, Pa.; Fred Shangle, Trenton, N. J.; R. D. E. Nelson, James E. Reine, Sun, Md.; E. H. Donovan, Brenford, Delaware; R. W. Balderston, Media, Pa.; R. F. Branton, West Chester, Pa. and 20,612 others.

Known bond holders, mortgages and other security holders, holding 1 per cent. or more of total amount of bonds, mortgages, or other securities: (If there are none, so state.) None.

Average number of copies of each issue of this publication sold or distributed, through the mails or otherwise to paid subscribers during the six months preceding the date shown above. (This information is required from daily newspapers only.)

AUGUST A. MILLER.

Sworn to and subscribed before me this 5th day of October, 1927.

W. H. Henderson,

Notary Public.

My commission expires March 31, 1931.

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN

The basic price quoted below for September, 1927, is to be paid by cooperating dealers on the average basic quantity established for each producer. For all milk bought in excess of the basic amount, the surplus prices quoted below for the month of September are to be paid. Beginning with January, 1927, the basic quantity will be established by using the higher average basic quantity established in October, November and December of either 1925 or 1926.

These quotations are based on 3% butterfat milk and a differential of 4 cents for each tenth point and 2 cents for each half tenth point up or down and are for all railroad points.

(Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES

This price list is issued with the understanding it is not to the producers and that all buyers using it as a basis of payment to producers, shall in addition thereto make the following contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2¢ per 100 pounds (46 1/2 quarts) of all milk purchased from any producer at price listed hereon.

(2) To the Inter-State Milk Producers' Association 2¢ per 100 pounds (46 1/2 quarts) of all milk bought from members of said Association.

(3) To the Philadelphia Inter-State Dairy Council 2¢ per 100 pounds (46 1/2 quarts) of all milk bought from other producers at price listed hereon.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets, and for an educational campaign advertising the food value of dairy products.

BASIC PRICE

September

F. O. B. Philadelphia
GRADE B MARKET MILK

Test per cent.	Per 100 lbs.	Price per qt.
3.0	\$3.29	7.1
3.1	3.31	7.1
3.05	3.33	7.15
3.1	3.35	7.2
3.15	3.37	7.25
3.2	3.39	7.3
3.25	3.41	7.35
3.3	3.43	7.4
3.4	3.45	7.4
3.45	3.47	7.45
3.5	3.49	7.5
3.55	3.51	7.55
3.6	3.53	7.6
3.65	3.55	7.65
3.7	3.57	7.65
3.75	3.59	7.7
3.8	3.61	7.75
3.85	3.63	7.8
3.9	3.65	7.85
3.95	3.67	7.9
4.0	3.69	7.95
4.05	3.71	8.0
4.1	3.73	8.05
4.15	3.75	8.1
4.2	3.77	8.15
4.25	3.79	8.2
4.3	3.81	8.25
4.35	3.83	8.3
4.4	3.85	8.35
4.45	3.87	8.4
4.5	3.89	8.45
4.55	3.91	8.5
4.6	3.93	8.55
4.65	3.95	8.6
4.7	3.97	8.65
4.75	3.99	8.7
4.8	4.01	8.75
4.85	4.03	8.8
4.9	4.05	8.85
4.95	4.07	8.9
5.0	4.09	8.95

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

SEPTEMBER SURPLUS PRICE

F. O. B. Philadelphia

Test per cent.	Per 100 lbs.	Class I	per qt.
3.0	\$2.34	5.05	5.6
3.05	2.36	5.05	5.6
3.1	2.38	5.1	5.65
3.15	2.40	5.15	5.7
3.2	2.42	5.2	5.75
3.25	2.44	5.25	5.8
3.3	2.46	5.3	5.85
3.35	2.48	5.35	5.9
3.4	2.50	5.4	5.95
3.45	2.52	5.45	6.0
3.5	2.54	5.5	6.05
3.55	2.56	5.55	6.1
3.6	2.58	5.6	6.15
3.65	2.60	5.65	6.2
3.7	2.62	5.7	6.25
3.75	2.64	5.75	6.3
3.8	2.66	5.8	6.35
3.85	2.68	5.85	6.4
3.9	2.70	5.9	6.45
3.95	2.72	5.95	6.5
4.0	2.74	6.0	6.55
4.05	2.76	6.05	6.6
4.1	2.78	6.1	6.65
4.15	2.80	6.15	6.7
4.2	2.82	6.2	6.75
4.25	2.84	6.25	6.8
4.3	2.86	6.3	6.85
4.35	2.88	6.35	6.9
4.4	2.90	6.4	6.95
4.45	2.92	6.45	7.0
4.5	2.94	6.5	7.05
4.55	2.96	6.55	7.1
4.6	2.98	6.6	7.15
4.65	3.00	6.65	7.2
4.7	3.02	6.7	7.25
4.75	3.04	6.75	7.3
4.8	3.06	6.8	7.35
4.85	3.08	6.85	7.4
4.9	3.10	6.9	7.45
4.95	3.12	6.95	7.5
5.0	3.14	7.0	7.55

OCTOBER PRICES

Inter-State Milk Producers' Association

The price paid for basic milk during October, will, subject to market conditions, be the same price as quoted for September, 1927. The basic quantity will be established by using the higher of the 1925 or 1926 established basic amounts. Milk shipped in excess of the basic amount will be paid for by cooperating dealers as surplus milk, based on the average price of 92 score, solid packed butter, New York City, plus 20 per cent for the month.

BASIC PRICE

September

GRADE B MARKET MILK

Test per cent.	Per 100 lbs.	Price per qt.
3.0	\$3.29	7.1
3.1	3.31	7.1
3.05	3.33	7.15
3.1	3.35	7.2
3.15	3.37	7.25
3.2	3.39	7.3
3.25	3.41	7.35
3.3	3.43	7.4
3.4	3.45	7.4
3.45	3.47	7.45
3.5	3.49	7.5
3.55	3.51	7.55
3.6	3.53	7.6
3.65	3.55	7.65
3.7	3.57	7.65
3.75	3.59	7.7
3.8	3.61	7.75
3.85	3.63	7.8
3.9	3.65	7.85
3.95	3.67	7.9
4.0	3.69	7.95
4.05	3.71	8.0
4.1	3.73	8.05
4.15	3.75	8.1
4.2	3.77	8.15
4.25	3.79	8.2
4.3	3.81	8.25
4.35	3.83	8.3
4.4	3.85	8.35
4.45	3.87	8.4
4.5	3.89	8.45
4.55	3.91	8.5
4.6	3.93	8.55
4.65	3.95	8.6
4.7	3.97	8.65
4.75	3.99	8.7
4.8	4.01	8.75
4.85	4.03	8.8
4.9	4.05	8.85
4.95	4.07	8.9
5.0	4.09	8.95

SEPTEMBER SURPLUS PRICE

At All Receiving Stations

Test	Per 100 lbs.
3.0	\$ 1.77
3.05	1.79
3.1	1.81
3.15	1.83
3.2	1.85
3.25	1.87
3.3	1.89
3.35	1.91
3.4	1.93
3.45	1.95
3.5	1.97
3.55	1.99
3.6	2.01
3.65	2.03
3.7	2.05
3.75	2.07
3.8	2.09
3.85	2.11
3.9	2.13
3.95	2.15
4	2.17
4.05	2.19
4.1	2.21
4.15	2.23
4.2	2.25
4.25	2.27
4.3	2.29
4.35	2.31
4.4	2.33
4.45	2.35
4.5	2.37
4.55	2.39
4.6	2.41
4.65	2.43
4.7	2.45
4.75	2.47
4.8	2.49
4.85	2.51
4.9	2.53
4.95	2.55



On this farm near Marlette, Mich., a herd of 14 cows produced 23,274 pounds of milk and 766.57 pounds of butterfat in April. The herd in that month had 12,600 pounds of silage and 4,200 pounds of hay, costing \$46.20; 3,420 pounds of oats and 3,420 pounds of AMCO 32% SUPPLEMENT DAIRY, costing \$124.80; a total feed cost of \$171. The milk was sold for \$525.20, representing a profit of \$354.20 net for the month to the herd's owners, Price, Ricket and Company.

To cash in on your home-grown grain feed it with AMCO 32% DAIRY

FED alone, your home-grown grains will not return what they cost you in time, effort, and money, even with milk at high prices. Nor can you buy any single ingredient which will add all the feeding qualities you must have to maintain your cows in good flesh, and get the last ounce of milk from them. What you require is a mixture of feed ingredients which, when fed with your home-grown grain, will bring out all the good that's in it and give your cows a ration that is palatable, highly digestible, balanced, and economical enough to make you some money.

Hundreds of dairymen in Pennsylvania and other states, where large quantities of home-grown grain is used, have found AMCO 32% SUPPLEMENT DAIRY exactly the right mixture to meet their needs. Feeding AMCO 32% SUPPLEMENT DAIRY with your home-grown stuff, you will make enough milk not only to show you a profit over your feed bill, but on your home-grown grain as well.

To get 1000 lbs. of a 24% PROTEIN FEED from your home-grown grains use one of these mixtures

650 lbs. AMCO 32% and 350 lbs. Corn Meal
650 lbs. AMCO 32% and 350 lbs. Corn and Cob Meal
600 lbs. AMCO 32% and 400 lbs. Ground Oats
600 lbs. AMCO 32% and 400 lbs. Ground Barley
600 lbs. AMCO 32% and 400 lbs. Ground Corn and Oats
600 lbs. AMCO 32% and 400 lbs. Ground Barley and Oats

To get 1000 lbs. of a 20% PROTEIN FEED from your home-grown grains use one of these mixtures

500 lbs. AMCO 32% and 500 lbs. Corn Meal
500 lbs. AMCO 32% and 500 lbs. Corn and Cob Meal
400 lbs. AMCO 32% and 600 lbs. Ground Oats
400 lbs. AMCO 32% and 600 lbs. Ground Barley
400 lbs. AMCO 32% and 600 lbs. Ground Corn and Oats
400 lbs. AMCO 32% and 600 lbs. Ground Barley and Oats

AMCO

FEED MIXING SERVICE

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DIVISION OFFICE: MUNCY, PA.

Dairy Cow is Good Market for Farm Crops and Labor

A dairy-herd-improvement association is an organization of dairy farmers who cooperatively employ a man to test their cows for economical production of milk and butterfat. The tester visits each farm one day each month, weighs the feed and milk of each cow, tests the milk for butterfat, and figures the results.

The dairy-herd-improvement association furnishes the dairyman definite information regarding the milk and butterfat production of each cow, thus enabling him to cull out the low producers, to feed the remainder according to known production, and to breed up a herd in which the daughters excel their dams. That all this is adding to the profits of members of dairy-herd-improvement associations is indicated by the increase in the number of these associations.

It is estimated that the average dairy cow in this country produces annually about 4,500 pounds of milk containing about 180 pounds of butterfat. The records of thousands of cows tested regularly show average yields of more than 7,200 pounds of milk and 282 pounds of butterfat. Several associations have average yearly records of more than 300 pounds of butterfat.

In the Ottertail, Minn. association in 1924-25 the cow produced an average of 299 pounds of butterfat and returned a little more than \$3 for every dollar's worth of feed consumed. Moreover, each cow returned \$101 income above feed cost. Commenting on this record J. C. McDowell of the United States Department of Agriculture remarks that any cow that returns \$3 for every dollar spent for feed is a good market for feed, and that a cow that each year returns \$100 above feed cost is a good labor market.

Drugs Ineffective in Treating Infectious Abortion of Cattle

Losses from infectious abortion of cattle, caused by a germ known as *Bacillus abortus* (Bang), are not likely to be prevented or reduced by drugs or medicinal compounds. The malady is commonly acquired through the mouth by consuming feed and drink contaminated with the germs, by licking affected animals, contaminated mangers or other objects. The disease is commonly brought into healthy herds by the introduction of affected cows and pregnant heifers.

While the act of abortion is the most apparent symptom of the disease, sterility (barrenness) in affected herds is commonly more or less troublesome; animals give birth to calves which, although living, may be too weak to resist some of the more common ailments; cows show a tendency to retain their after-births; and a reduced milk production is occasioned by failure of animals to complete their normal gestation periods. Losses due to these conditions may equal or even exceed those represented by the number of calves born dead.

More detailed information concerning the disease is given in Farmers' Bulletin No. 1596-F, "Infectious Abortion of Cattle," a recent revision of an earlier publication. A copy of the bulletin may be obtained free upon application to the United States Department of Agriculture, Washington, D. C.

Cow Testing Growing in Favor

National Herd Honor Roll is Greater Than Ever

The National Herd Honor Roll, created by the National Dairy Association, to stimulate interest in increased milk and butter fat production and the keeping of better herds is greater by nearly a thousand herds than ever before.

Herds of five or more cows which have produced at least 300 pounds of butterfat per cow per year "make" the Honor Roll which now includes more than 6,000 herds.

Wisconsin again leads the nation this year with approximately 1400 herds an increase of more than 175 herds. Michigan has 1078 herds. Minnesota had 538 herds in 1926. This year the state has 659. Ohio jumped from 191 herds last year to 258 this year. Washington did not have a herd listed last year. This year the apple state registered 88 herds. Pennsylvania jumped from 335 to 426 herds. Idaho gained 38 herds. Massachusetts lists 70 herds this year against 9 in 1926.

Virginia predominates among the Southern states with 105 herds, an increase of nearly 100 per cent over last year. Georgia has six herds. Reports from other states had not been received up to time of going to press.

Cow Testing Associations fostered by the National Dairy Association have been responsible for the growth of the Herd Honor Roll. The "C. T. A." principal function is to keep an accurate check on the milk and butterfat production of herds owned by the dairymen who make up the Test Associations. The number of these organizations is expected to increase rapidly in the South, with the coming of the milk-consuming industries and the increased demand for dairy products according to S. H. Anderson, executive secretary of the National Dairy Exposition which will be held at Memphis, Tenn., Oct. 15-22.

Bovine TB Eradicated From 347 Counties

Information received by the United States Department of Agriculture shows unusual interest on the part of State legislatures in making appropriations for the eradication of tuberculosis from domestic livestock. The appropriations made by the States, together with approximately \$6,000,000 appropriated by the last United States Congress, make available for the ensuing year's work approximately \$18,500,000. In addition to the appropriations, valuable new legislation, amending various State laws, is expected to speed up the work in a number of States.

The campaign for eradicating tuberculosis in domestic livestock made exceptional progress during the fiscal year ending June 30, 1927. Records of the Bureau of Animal Industry show that 347 counties have completed the necessary official tests and have qualified for recognition as tuberculosis-free areas. This number constitutes more than 11 per cent of the total number of counties in the United States. In addition 945 counties were actively engaged in the area project at the beginning of the current fiscal year.

The value of timber, along with other economic conditions, says the Forest Service, is causing land owners more and more widely, to study the possibilities of profitable reforestation.

COW TESTING ASSOCIATIONS

Montgomery County Association

F. E. MARTIN, Tester

In the month of August twenty-five herds were on test in the Montgomery County Cow Testing Association. Two hundred and ninety-nine cows were in milk and fifty-three were dry. Three unprofitable cows were sold during the month. Twenty-four cows produced over 40 pounds of fat and three produced over 50 pounds. Forty-eight produced more than 1000 pounds and 16 over 1200 pounds of milk.

Highest herd average milk production:

Owner	Breed	Cows in herd	Average Lbs. Fat
Ursinus College	R. H.	16	853
Allebach, H. D.	R. H.	14	850
Hunsicker, A. D.	Mxd.	10	767
Bechtel, Harry	Mxd.	20	706

Highest herd average butterfat production:

Owner	Breed	Cows in herd	Average Lbs. Milk
Camp Discharge Farm	R. G.	18	31.3
Randolph, W. C. F.	R. J.	13	30.3
Allebach, H. D.	R. H.	14	28.5
Ursinus College	R. H.	16	28.1

The Honor Roll—with cows producing over 40 pounds of fat or more, during the month included: Wm. H. Landis, one cow; W. C. F. Randolph, four cows; Ursinus College, four cows; H. D. Allebach, two cows; Willow Creek Farm, two cows; Camp Discharge, three cows; C. E. Longacre, two cows and O. M. Woodward, J. L. Wood, C. E. Wismer, A. D. Hunsicker, A. K. Rothenburger and Warren Schultz, each with one cow.

New Jersey Cow Testing Studies

Official cow testing studies No. 21, for the month of July, issued by cooperative extension work in Agriculture and Home Economics show the following records for the month.

High Cows in Milk Production for July

Association	Member	Name of Cow	Milk	Breed
Salem No. 1	Lester Harris	Daisy	1860	H.
Somerset	C. V. N. Davis	Whitely	2225	H.
Burlington No. 1	Bordentown Indust. School No. 5	Prilly 2	2012	H.
Monmouth	J. L. Pittenger	Top Notch, Jr.	1869.3	H.
Burlington No. 2	J. H. Atkinson	White Face	1722	H.
Burlington No. 3	O. L. Darnell	Prilly 2	1851	H.
Flemington	MacBae Farm	No. 8114	1795	G.
Passaic	J. Schumann	Sadie	1798	H.
Cumberland-Salem	Arthur Waddington	Grace	1807	H.
Morris	Wolf Bros.	Long Legs	1767	H.
Warren	Frank Castner	Fairholm	2101	H.
Sussex No. 1	Tranquillity Farms	Clarinda	2245	H.
Sussex No. 2	Belle Ellen Stock Farm	No. 51	1863	H.
Mercer	Mr. Hamilton	Grace	2384	H.
Mercer-Middlesex	Walter Stelle	Ormsby	1815	H.

High Cows in Butterfat Production for July

Association	Member	Name of Cow	Milk Butterfat	Breed
Salem No. 1	J. W. Ridgway	Aleyon	76.8	H.
Somerset	J. V. D. Bergen	Echo Bosch Keyes	84.7	H.
Burlington No. 1	Smith & Schreiber	Horney	87.6	H.
Monmouth	J. L. Pittenger	Big White	75.6	H.
Burlington No. 2	County Almshouse	No. 10	64.3	H.
Burlington No. 3	James Hughes	Polly	83.3	H.
Flemington	MacBae Farm	No. 8114	73.6	G.
Passaic	John Hinchman	No. 16	73.4	H.
Cumberland-Salem	Arthur Waddington	Grace	66.9	H.
Morris	Wolf Bros.	Bluey No. 1	64.9	H.
Warren	Frank Castner	Fairholm	81.9	H.
Sussex No. 1	Hudson Guild Farm	Ruby Ormsby	84.9	H.
Sussex No. 2	Leslie Price	Queen	66.3	H.
Mercer	C. E. Murray, Jr.	No. 91	65.3	H.
Mercer-Middlesex	Tindall Bros.	Virginia	69.2	H.

High Herd Averages for July

Association	Member	Lbs. Milk	Lbs. Butterfat
Salem No. 1	H. M. Plitcraft	1089	37.4
Somerset	J. V. D. Bergen	1030	36.7
Burlington No. 1	T. A. Smith and Chas. Schreiber	1130	42.0
Monmouth	E. C. Conover	980.6	43.9
Burlington No. 2	E. J. Bunting	810	33.8
Burlington No. 3	Alfred Bowne	977	34.2
Flemington	Clifford Snyder	1124.8	36.6
Passaic	J. Schumann	1077	36.4
Cumberland-Salem	Arthur Waddington	1022	35.7
Warren	V. C. Riegel & Son	968	34.3
Sussex No. 1	Hudson Guild Farm	1310	45.5
Sussex No. 2	A. J. Puls	1190	36.7
Mercer	Wm. Hamilton	1188	38.8
Mercer-Middlesex	Tindall Bros.	845.3	41.1

Middle Bucks County Cow Testing Association

The following is a report of the Middle Bucks County Cow Testing Association for the month of August.

Three Highest Herds in Milk Production

Owner	Cows Milking	Av. Lbs. Fat
L. P. Satterthwaite	13	1083
E. J. Ivins	8	986
Frank Oehrle	8	906

APPROVED and recommended BECAUSE It Gets ALL The Dirt

Many of the large milk condensaries require that all milk delivered to them is strained through Dr. Clark's Purity Strainers because tests have proved that it is the ONE strainer that absolutely insures CLEAN MILK.

Dr. Clark's Purity Strainer is the most sanitary and easiest to clean strainer on the market. None other like it—none equal to it. It is made in two sizes—10 qt. and 18 qt. Sold by good dealers everywhere.

More Money for Your Milk

Write today for descriptive literature explaining how and why PURITY users get more money for their milk. We will also send full particulars of our

10 Day Trial Test Offer

Send your name and address today—find out how you can test a Purity Strainer for 10 days and get your money back if it don't remove every particle of dirt, dust and sediment from your milk.

PURITY STAMPING CO.
Dept. F3 Battle Creek, Mich.

INSURES GRADE "A" MILK

PURITY MILK STRAINER

WHITEWASH WITH WARNER'S

"LIMOID"

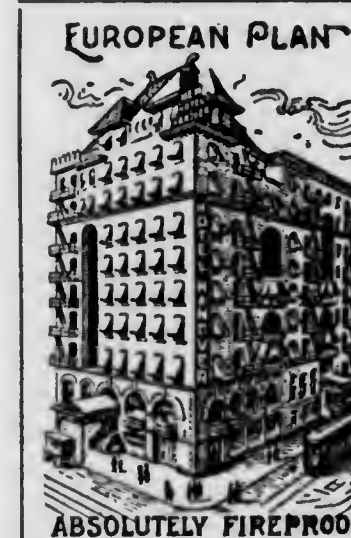
Healthy cows to give pure milk must have clean, fresh, sanitary stables.

Mix water and Warner's Limoid to proper consistency and you have a perfect whitewash which will spread nicely with a brush or can be sprayed without clogging nozzles.

Sold in 10-lb. and 50-lb. paper bags. "Limoid" can be stored indefinitely without deterioration or fire risk. Ask your dealer or write direct.

Charles Warner Company

ODD FELLOW BLDG. WILMINGTON, DEL.



The HOTEL HANOVER

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One Block from Reading R. R. Two Blocks from Penna. R. R.

Rooms \$2.00 and Up
Special Luncheon \$.50 Special Dinner \$1.00

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THE NAME TO GO BY—WHEN YOU GO TO BUY PAINT AND VARNISHES

Write for color Cards and Booklet "Paint Pointers"
EUGENE E. NICE COMPANY, Inc., PHILADELPHIA

Three Highest Herds in Butterfat Production

Owner	Cows Milking	Av. Lbs. Fat
L. P. Satterthwaite	13	35.8
J. M. Geddes	10	35.3
E. J. Ivins	8	34.8

Four Highest Herds in Per Cent Butterfat

Owner	Per Cent	Breed
J. M. Geddes	5.70	R. Jerseys
George S. Havens	4.80	R. Guernseys
Bolton Farms	4.75	R. Guernseys
F. M. Garver	4.75	R. & G. Guernseys

When answering advertisements always mention The Milk Producers Review



New Material Adaptable to the Rural Program

The Philadelphia Inter-State Dairy Council is preparing much new material to be used next year. Among other things are a number of plays and sketches, talks, etc., which are well adapted to country audiences.

Synopsis of some of these are given below. Any further information regarding any of them will be furnished gladly by the Philadelphia Inter-State Dairy Council.

"SLEEPING BEAUTY"

A short, simple little play requiring about fifteen minutes for presentation. Eleven children in the cast—5th to 7th or 8th grade age.

Eight characters are symbolic, wearing costumes appropriate to the qualities or articles represented.

The sketch may be presented where no stage is available. It may be done between classrooms of a school when there is no auditorium.

Very few rehearsals are required.

A dance may be introduced if desired.

Synopsis of Play

The Sleeping Beauty Princess cannot be awakened. Without Beauty the court is dull. Many of her subjects have tried to arouse her. Fresh Air, Sunshine, Water, Fruits, Vegetables, Milk, Exercise and Sleep strive to awaken Beauty. Sleep suggests that the combined efforts of them all may be effectual. The little maid agrees. Each one offers his or her gift in pantomime. The result is the awakening of the Princess, the return of Beauty to the Kingdom of Youth.

"THE HAPPY INTERLUDE"

A group of joyous adventures in Healthland, so arranged that the skits may be used separately.

Each skit emphasizes one of the health rules. Few characters and simple costumes.

Synopsis of "Happy Interlude"

When all episodes are used together). Scene:—The Court of Healthland. The Queen of Healthland calls for her loyal subjects to play before her. Fresh Air discovers a pale thin child asleep. He takes her to the Queen. The child has been visiting in Pic and Candyland and is lost. She is invited by the Queen to watch the healthy children at play and learn how they grow strong.

The milkmaids do a simple folk dance. The old vegetable woman, Punch and the children arrive; the Athletic Clowns; the Happy Family; and Rock-a-by-Baby group all bring their messages.

The Child resolves that she, too, will keep each of the Health Rules that she may become robust.

"INTERIOR DECORATING"

A twenty minute monologue given by a Dairy Council worker, illustrated with amusing cartoons.

Suitable to rural groups, banquets, clubs, Parent-Teacher affairs, etc. A mixed audience will better appreciate this talk.

The "Interior Decorating" refers to improving and remodeling one's husband by proper food; in other words, working out from within.

THE 4 H CLUB Its Aim and Development

The designation of "4 H" clubs has been given to that part of the national agricultural extension system through which rural girls and boys, 10-20 years of age, in and out of school, are taught better agriculture and home economics practices as well as the finer and more significant things of rural life. The 4 H's imply the equal development of Head, Hand, Heart and Health—or the mental, social, spiritual, and physical phases of a well rounded four-square life of the rural girl or boy. All of these things are considered necessary before they can enjoy the 5th H—which stands for the highest type of a true American home, because better rural homes which means a fine life in the country is the ultimate aim.

Every one of the 48 Land Grant colleges in the country co-operate with the U. S. Department of Agriculture and directs club work. Nearly 600,000 boys and girls are enrolled at the present time. In 1926, 673,997 projects were completed by the members; 2,716 4 H club camps were held, 76% of the total number of members enrolled completed their work satisfactorily and received their certificates.

"These young folks have learned to repeat each year their national 4 H Club pledge: 'I pledge my head to clearer thinking; my heart to greater loyalty, my health to better living, and my hands to greater service, for my club, my home, my community, and my country.' Their motto is 'To Make the Best Better'."

4 H club work is now being conducted not only in the 48 states of the United States, but in England, France, Belgium and Canada as well.

The work in the United States is supervised by approximately 3,000 federal state and county extension agents, assisted by over 45,000 local volunteer 4 H club leaders. These leaders assist the agents by helping individual members of the clubs to develop the 4 H's and also train them for leadership; in modern methods of farming and homemaking; to make money; to win prizes; take educational trips; make country life more attractive; attending club meetings, rallies, camps and short courses.

One of the requirements for membership is that the boy or girl must agree to conduct one or more demonstrations and carry on one project as instructed by the leaders. The girls are offered projects in serving, cooking, canning, millinery, poultry-raising, home furnishings, gardening and so on. The boys have poultry, dairy, pig, corn, tomato, cotton and other such projects.

In addition to carrying on this project each member is required to keep a true and accurate record of their club demonstration in the official club record book as each operation is performed. This of course, gives them experience in record-keeping, budgeting, etc. Then the members are trained to give demonstrations along numerous lines. The best demonstrators in the country are often given a trip to a State Short Course or Club Week where they compete with other county winners, and also exchange ideas. The State winners often go to the large expositions and fairs held in different sections of the country. The 14 eastern states send their best to Springfield, Mass., each year to the Eastern States Exposition. On the grounds there the 4 H have their own buildings, exhibits and demonstrations. They also hold a week's school which they call "The 4 H School of Leadership". Each year the winning boys' cattle-judging team gets a free trip to Europe to compete in the international contest for the \$3,000 gold cup offered by the London Times. The boys' team from Maryland has gone three years. One year the girls' canning club teams competed for a trip to Europe. The team from Iowa won. Of course all the members of the 4 H clubs must agree to take an active part in all community meetings, and all county meetings possible; and to exhibit club products at Community and County Fairs.

Health organizations have cooperated with club leaders in stressing the health feature of the 4 H program. The Dairy Council was represented this summer in a number of local 4 H camps, among them being the following: Delaware State Camp; Wicomico-Worcester Camp, Maryland; Dorchester-Caroline County Camp, Maryland; Maryland State Camp; Sussex County Camp, Delaware; and the Harford County Camp, Maryland. Dairy Council literature and projects are also being used in 4 H clubs throughout Pennsylvania, New Jersey, Maryland and Delaware.

The girls and boys are given special training in public speaking and parliamentary law, so that their club meetings are often held up to other rural organizations as the best so far as organization, parliamentary procedure, and so on are concerned. Sometimes the Grange, Farm Bureau or local Lodge will ask them for a demonstration of how to conduct a meeting in a business-like way. Very special training and emphasis is given the club members in courtesy soft-voices, choice of good words, unselfishness, and other things that give refinement and charm. They are taught to appreciate the beautiful in music, pictures, poetry, literature, art, and nature. They learn to love the out-of-doors and to make farm life the most desirable kind instead of the old drudgery it once seemed to be. They are trained in everything that makes for leadership, which after all is just what the whole country needs—good leaders. In one State (Miss.) we find on the wall in each club room the following:

Wanted—A Man to Lead

"There isn't a lad but wants to grow Manly and true at heart,
And every lad would like to know
The secret we impart.
He doesn't desire to slack or shirk.
Oh, haven't you heard him plead?
He'll follow a man at play or work
If only the man will lead."

The County, State and National Camps are only added incentives for the members to work for the privilege of attending them. And while they have a fine time swimming and playing at camp, they also have regular periods in which they do handcraft work, learn to tell stories, and have other instructions in interesting subjects.

The 4 H club members are learning the best and most efficient methods of farming and home-making. The girls learn how to be better managers and homemakers and mothers, with a wider realization of her duties and her privileges. The boys learn the duties of a father and his place in the making of a real home. In turn they will both give their families better opportunities than they, as young people, have had.

Too much cannot be said of all the splendid things that 4 H club work is doing for rural girls and boys everywhere. It assures us of a more refined, more cultured and well educated rural citizenship in the future—with splendid leadership and the very highest types of homes—and the home is the basis of our national progress and standards. Furthermore, we are beginning to think of the rural people as those upon whom everyone else in the world depends.

Adults! Hold On To Your Teeth

One turns on the street to look again at a beautiful set of teeth—rare indeed these days is a perfect thirty-two!

Five thousand years ago one from every hundred had decayed teeth; today the toll is taken from every ninety-five out of a hundred.

It takes eighteen years to finally complete the thirty-two teeth that should last us a lifetime. And yet by the age of eighteen or twenty the ravages of decay are too often obvious.

Caries, or tooth decay, is essentially a disease of childhood and adolescence. The only safeguard against this ever increasing tool gatherer is the consistent diet of simple natural foods as a regular daily habit.

Adult life ushers in a new danger—pyorrhea—a disease effecting the gums and slowly proceeding toward the root, destroying the tissues that hold the tooth in place and eventually effecting the surrounding bony structure with the loosening and loss of sometimes perfectly sound teeth.

Much like the problem of rickets, the causes of pyorrhea are not definitely known, yet some of the factors that contribute to this dreaded condition are well-known to science.

Dr. Herman Printz who has studied this problem for a long time lists the four factors as follows:

1. Low resistance of the surrounding tissues to infection.
2. The formation of heavy calculus deposits against the gum line.
3. Poorly fitting teeth which go back to early development in childhood.
4. A wasting of the tissues as a result of deficient nutrition.

The serious mistake grown-ups make in in thinking that only children must have lime salts for building teeth, forgetting that adult tissues also need lime for nourishment to keep them in a healthy condition and to prevent withdrawal of lime salts from the teeth in an emergency like illness.

One of the most important things to remember after a sufficient amount of calcium (lime salts) is supplied in the diet is to avoid eating an overabundance of those foods which result in an excess of acid in the blood such as meat, cereals, and too many eggs, but to keep a slightly alkaline condition by the use of an abundance of fresh green vegetables, fruits and milk. If you are one of those who are afraid of getting fat, you must get your calcium from skim-milk, butterfat, or cheese, but milk you must have in some form if you are to avoid disastrous results through lime depletion. Sweets, stick pastries, and a diet of highly refined foods not only fails to furnish proper nourishment for the dental structures, but results in an unhygienic mouth.

Dental care, though expensive, is becoming more easily available for the rural districts. If we are to keep our teeth, regular dental care pays good dividends—a third set of teeth may cost less effort, but they are only one-fourth as efficient masticators and rarely as becoming as nature's own.

Take it Easy

When a meal that is ten minutes late upsets your disposition for the rest of the day, when Tom's muddy tracks in the kitchen nearly make you lose your temper, when the household duties seem to pile up endlessly, it is probably time to take an hour or even a day off to rest, for it usually is tiredness that makes you cross and irritable, says the state college of home economics at Ithaca, N. Y.

But why not think it over to see if each day's work can be made easier? Perhaps a high stool in the kitchen will help by allowing you to take the weight off your feet a while. Such a stool can be used at the sink while preparing vegetables or washing dishes or even for the ironing. Just because you never sat down to such jobs doesn't mean that you can't begin now. Or move the work-table or cabinet and the supply closets nearer the sink and stove to save steps. Get a service wagon or tray-on-wheels to cut down the number of trips between the dining room and pantry.

Collect the mending bag, the darning, the sewing machine and all the rest of the sewing equipment in one room or in one corner of a room and keep it there so you will have just one place to go when you have a few free minutes to sew. And train Tom to wipe his own muddy tracks, and the rest of the family to put away their own belongings—train them cheerfully, of course, but firmly just the same. Plan definitely so that you can take life a bit more easily and the wrinkles will begin to smooth out and the whole world will look brighter.

Farm Flocks Make

High Egg Averages

Mrs. I. V. Otto's 138 White Leghorn hens and pullets at Carlisle led demonstration farm flocks of the state in August, the Pennsylvania State College poultry extension service reports. They averaged 22.8 eggs. The second best record made by a flock in the 100-hen and pullet division was 22.7 eggs each by 215 White Leghorns owned by Harry J. Kauffman, Drums, Pa.

Flocks of 100 or more pullets were led by 225 White Leghorns, owned by John Toivonen, Girard, with an average of 22.2 eggs per bird. Producing 20.9 eggs each, 245 White Leghorns on the farm of Joseph Hillier, Cooperstown, were second. His flock of 276 White Leghorns took first place in the 50-hen division by laying an average of 18.5 eggs. Eighty-nine White Leghorns in the flock of C. D. Sandt, Mt. Bethel, laid 18.2 eggs each to capture second honors.

Philadelphia Inter-State Dairy Council

General Offices

Boyetown Building, Philadelphia

A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value in nutrition.

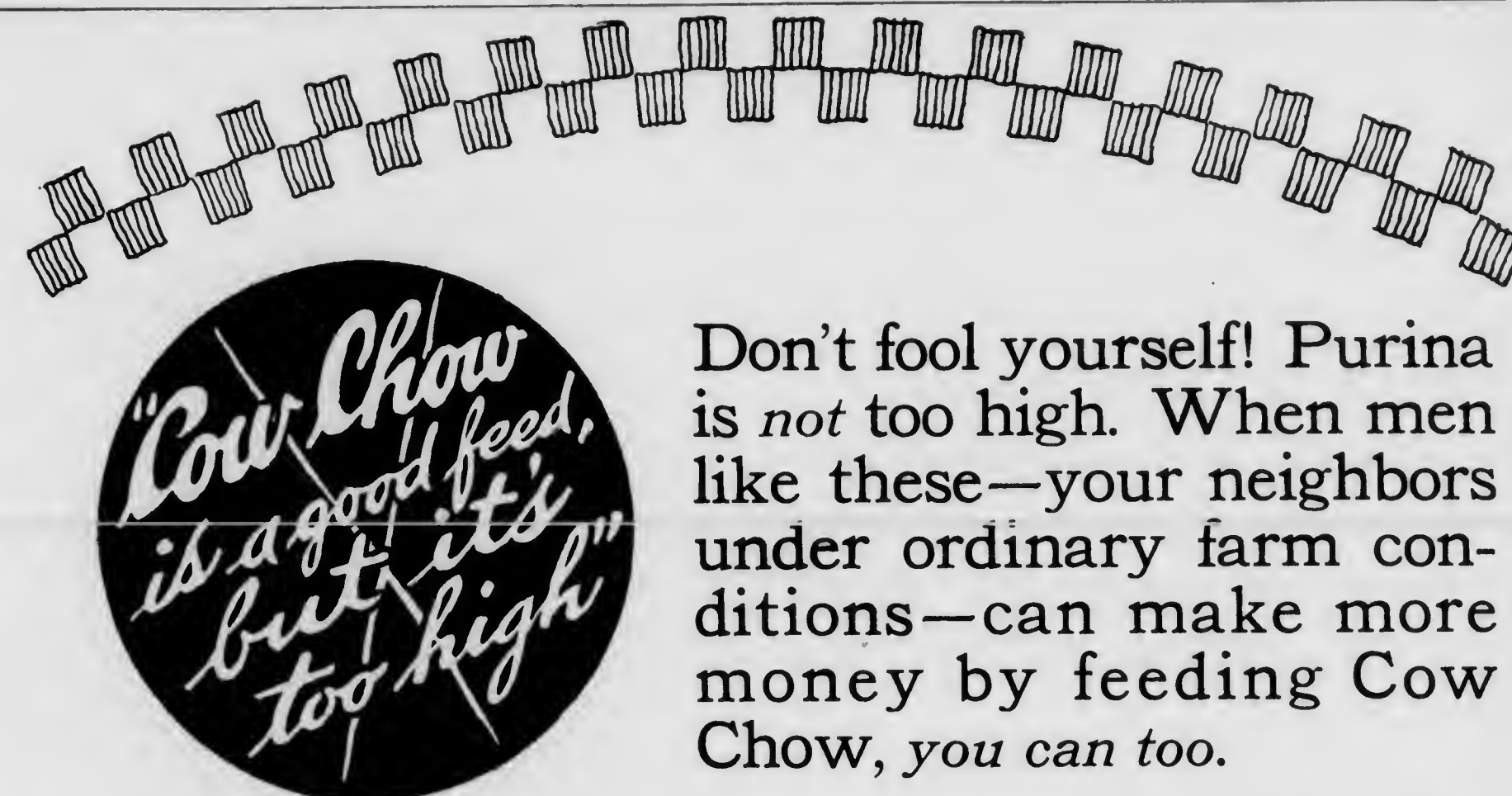
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Aaron Erdman, of Dauphin County, Pa., had the high cow in the Cow Testing Association last year and produced milk for \$1.09 per cwt., grain and roughage included.

Stanley Smith, at Lewisburg, Pa., has eight cows that made an increase in net profit per month of \$110.70 on Cow Chow.

A. W. Fulton, Poolesville, Maryland changed his herd of 8 cows over from the ration he had been feeding to Cow Chow. His net monthly profit increased \$21.60 as a result.

Harvey Wilson, Ellendale, Delaware, has 8 cows that increased his monthly net profit \$25.20 when he began feeding Cow Chow.

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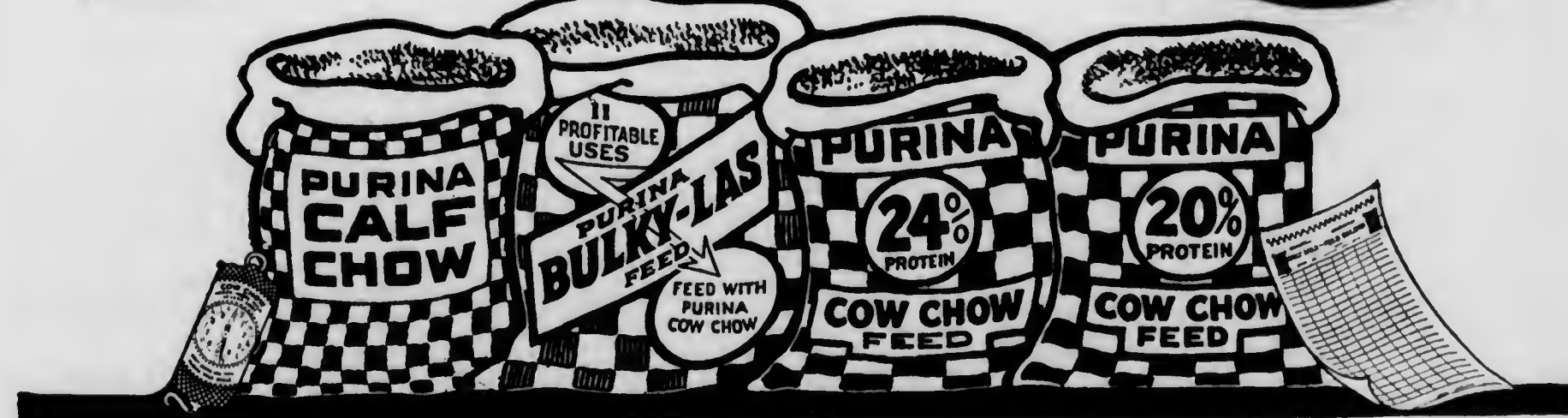


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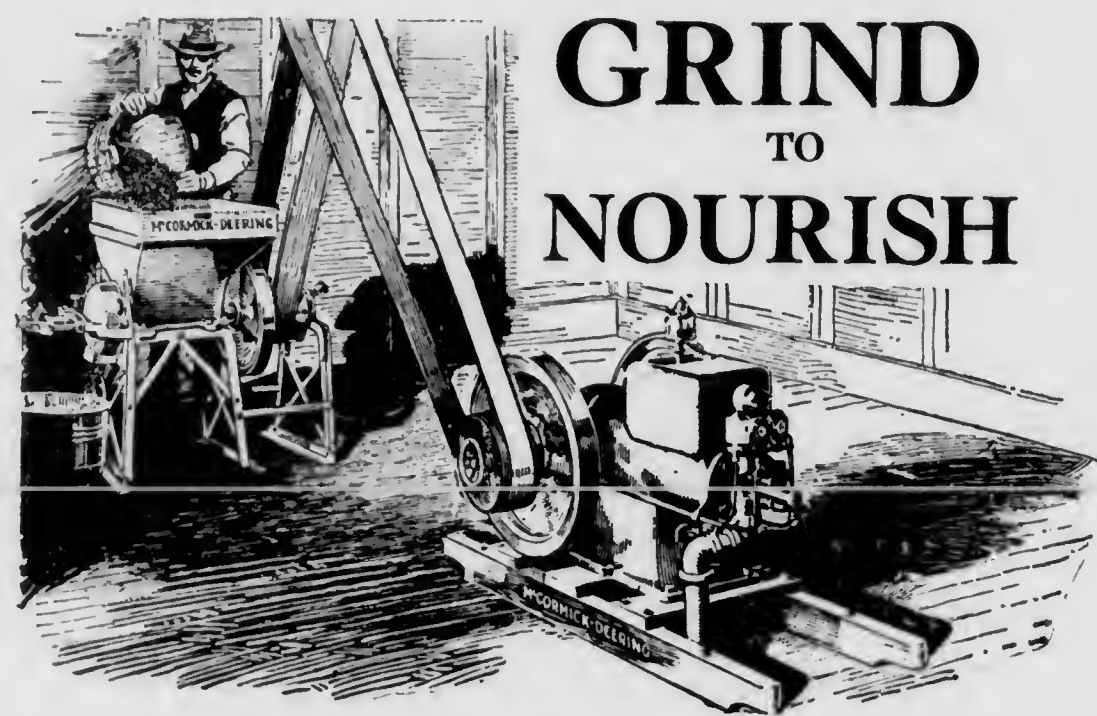
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Name New Extension

Workers for State

Several changes in the agricultural extension service staff of the Pennsylvania State College have just been announced. They include appointments, transfers, and leaves of absence.

Howard G. Niesley, in charge of the extension work in agricultural economics, has been selected to perform the duties of assistant director of agricultural extension, the position left vacant by the resignation of R. H. Bell, who now is chief of the Bureau of Plant Industry in Harrisburg. Niesley is a graduate of the Pennsylvania State College and holds a higher degree from the University of Wisconsin. He was agricultural agent of Dauphin county from 1917 until 1923, when he took charge of the agricultural economics extension work.

As successor of R. Bruce Dunlap, extension farm agent in Blair county since 1912, E. G. Hamill has been named. Dunlap resigned to accept an agricultural position with the State Department of Welfare. He held the record for years of service as a county agent in Pennsylvania. Hamill graduated from Penn State in 1923. First an assistant in Jefferson county, he went to Sullivan county as county agent January 1, 1924. J. W. Learn, once assistant county agent in Monroe county, succeeds Hamill.

Carl O. Dossin has succeeded John C. Taylor as assistant poultry extension specialist. Taylor now holds a similar position in New Jersey. Dossin is a graduate of the Connecticut Agricultural College and has a higher degree from the North Carolina State College. He comes to Pennsylvania from Connecticut where he has been in the same line of work.

Report of the Field and Testing Department Inter-State Milk Producers' Association.

The following statistics show the aggregate operations of all the Inter-State Milk Producers' Association field men in connection with testing, weighing and general membership work, for the month of August, 1927.

No. Tests Made 5091
No. Plants Investigated... 88
No. Membership Calls ... 366
No. Signed 139
No. Cows Signed 872
No. Transfers Made 25
No. Meetings Attended... 15
No. Attending Meetings... 5175

College Ayrshire Cow Sets World's Record

A world's champion Ayrshire record in the 305-day class has been made by Sir Robert's Romona Bell, owned by the Pennsylvania State College, Prof. A. A. Borland, head of the dairy husbandry department, announces.

Completing her year as a junior 4-year-old, this Ayrshire champion produced 14,744 pounds of milk and 572.42 pounds of butterfat. Because of this record she wins a French cup.

When she was a junior 2-year-old she produced 12,861 pounds of milk and 534.5 pounds of butterfat, winning a French cup in 1924 by producing more milk and butterfat than any other 2-year-old that year.

Sir Robert's Romona Bell was presented to the college by the Masonic Homes Farm at Elizabethtown, Pa.

New Jersey Farm

Products Show

Representatives of twelve state agricultural organizations and of the State College of Agriculture and Experiment Station met with the Department of Agriculture at Trenton recently to discuss their plans for "Agricultural Week" which will be held in Trenton, January 10 to 13, 1928.

Prominent among the features which will make this year's Farm Products Show distinctive is the exhibit of certified baby chicks, which will replace the usual poultry exhibit. This is an innovation in the exhibit field and is creating lively interest. It will demonstrate the lead our State is taking in this progressive undertaking, under which plan New Jersey last year shipped 4,600,000 chicks known to be from healthy flocks and true to type.

Other exhibits which will be changed and enlarged are the machinery exhibits, which were staged for the first time last year, and the State Corn Show to which will be added premiums for certain varieties especially well adapted to New Jersey conditions.

Programs for the annual meetings of the various state agricultural associations show that the officers already have these well in mind, and subjects of vital import to the growers at this time will be thoroughly covered.

The associations holding meetings during "Agricultural Week" are The State Federation of County Boards of Agriculture, State Poultry Association, State Horticultural Society, State Potato Association, New Jersey Alfalfa Association, Holstein-Friesian Cooperative Association, New Jersey Guernsey Breeders' Association, Farmers' Roadside Market Association of New Jersey, Beekeeper's Association, New Jersey Home Bureau, New Jersey Swine Growers and Rural Church Workers.

Alfalfa Has Sweet Tooth

Unless the soil is sweet it is practically useless to attempt to grow alfalfa. If there is any doubt in the matter, samples of soil, not over four inches deep, should be taken from several parts of the field, mixed together and a composite sample sent to your county agent for test. He will report whether lime is needed and the approximate amount per acre.

The New York State college of home economics advises a quart of milk a day for children and a pint for adults.

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Will Sell Cheap to Prompt Buyer
I. R. ZOLLERS, Gilbertsville, Pa.

The Truth Hurts Says National Dairy Council

(Continued from page 1)
make rats sick. It does not prevent growth and development.

Essential Food Elements Lacking

The Institute of Margarine Manufacturers has unconsciously stated what follows when margarine is used in a basic diet in its protest "against the exhibition of sick rats or other sick animals in connection with oleomargarine and butter". The sick condition is not caused by a contagious disease, but is the direct result of malnutrition resulting from the use of margarine in place of butter. This malnutrition, in turn, is accompanied by a lack of resistance to disease, which in the end often results in an infection of one form or another as Dr. Amy Daniels of the University of Iowa found in her experiment work with rats where oleomargarine was used in place of butter.

Food is intended to build body tissue and furnish the body with energy and it is not intended to make either rats or human beings sick. But, a so-called "food" like margarine, by reason of its lack of essential food elements can and does produce a condition which is a form of sickness as the Council's exhibit has shown thousands of people in a striking manner.

The statement in the complaint of the Margarine Institute, that "It (food) does not prevent growth and development" is misleading. Food is, by nature, intended to promote growth and development. Margarine because it lacks growth promoting elements, does not promote growth and therefore, its use does prevent growth causing the very thing which the Margarine Institute says "food" should not do.

The National Dairy Council will continue to inform the American public in its effective displays as to the relative food value of butter versus margarine.

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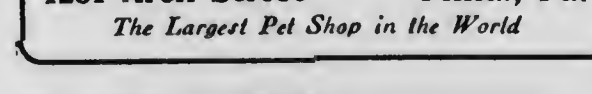
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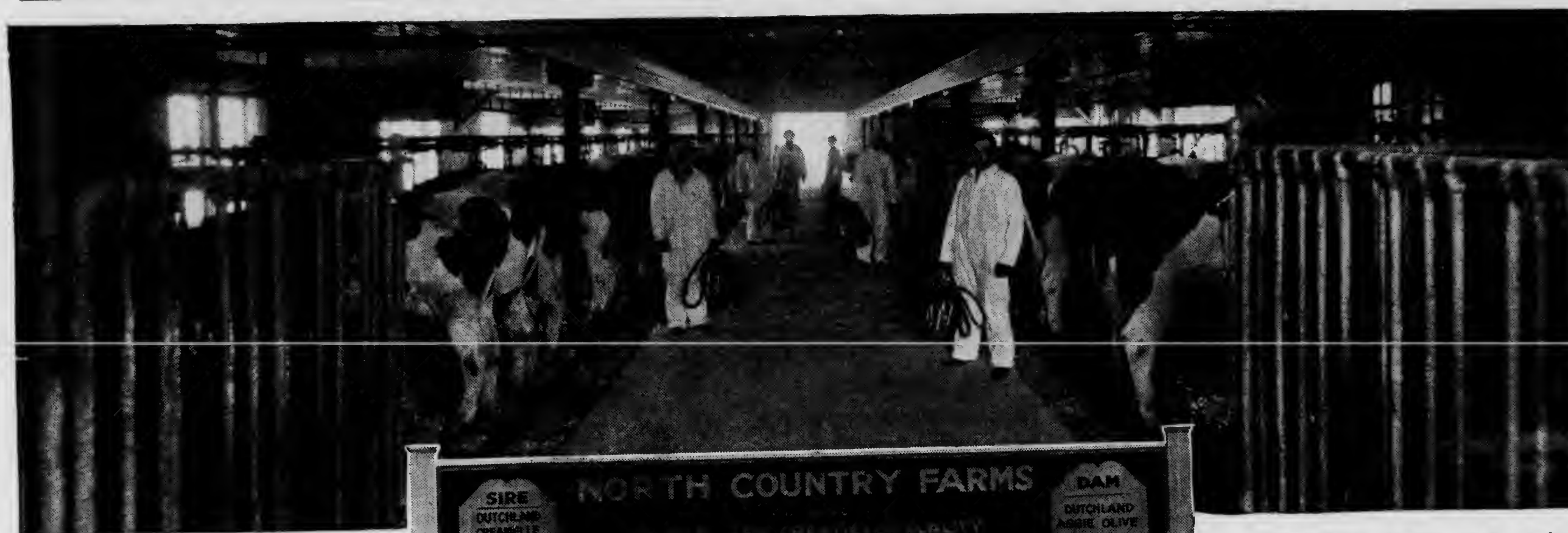
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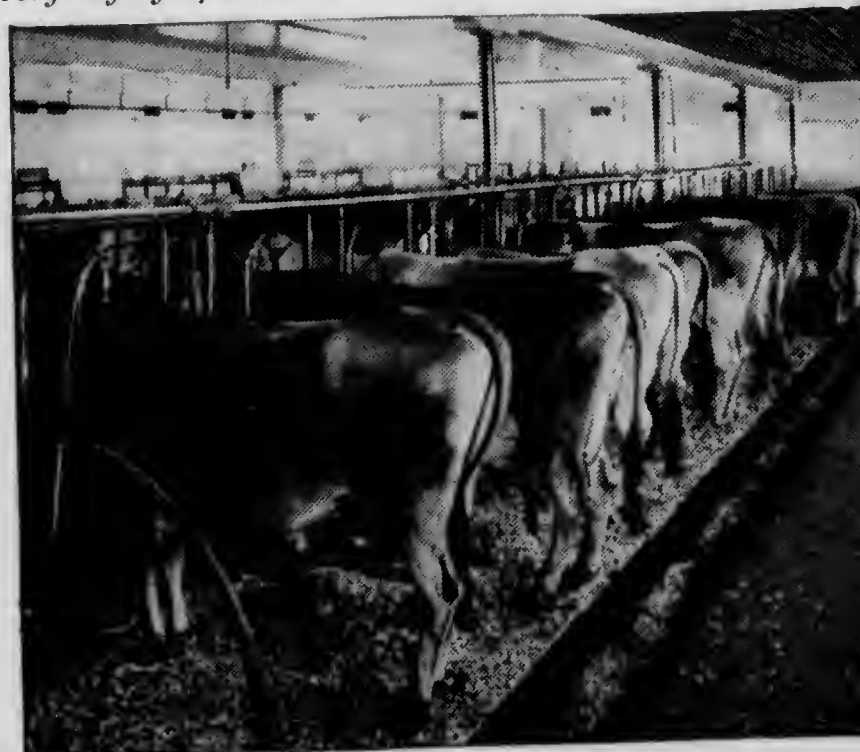
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Below: The splendid purebred Jersey herd owned by Mr. F. E. Duffy of West Hartford, Conn., and kept at Meadowbrook Farm. Mr. Duffy is one of the best known and best qualified judges of Jersey cattle in the East. Mr. Duffy has used the De Laval Milker for more than ten years with great success and he speaks very highly of its work.



Below: Many of these fine purebred Ayrshires have made excellent records and the herd is widely known for the general high type of its individuals. It is the Locust Farm herd owned by Mr. E. H. Parsons at Warwick, R. I. These cows are De Laval milked.

Left: These high producing purebred Guernseys are De Laval milked and are owned by Mr. Edward Haas, well known breeder at New Holstein, Wis.



Milk Producers' Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

Volume VIII

West Chester, Pa., and Philadelphia, Pa., November, 1927

Number 7

National Dairy Exposition Holds Annual Exhibition Memphis, Tennessee

The National Dairy Exposition held its 21st annual show, in Memphis, Tennessee, October 15 to 22, 1927. This was the first effort to bring the Dairy Show, directly to the south—"Dairying in Dixie" being the outstanding slogan.

There is no question that dairying particularly, in so far as the production for dairy products is concerned, is a possibility. In some sections condensing plants are already in operation and in others plans have been completed for condensed milk plants and cheese manufacture and it is quite possible that the south may develop extensively in those directions.

In addition to the elaborate display of dairy cattle, and dairying equipment the Tri-State Fair embodied the many general exhibits, particularly in so far as southern agriculture was concerned.

Cotton, sugar cane, the various legumes, potatoes, especially sweet potatoes, small grains and fruits were dominant exhibits. Taken all in all the exhibits were quite noteworthy and the attendance was quite large. Nearly seventy thousand attended one day during the show.

United States Department of Agriculture Exhibit

The exhibit of the Department in connection with the Dairy Industry was a most elaborate one. The significance to dairymen of recent studies was portrayed and illustrated in graphic form.

The Source of a Three Billion Dollar Industry; Good Cows are the Basis of Success; The Dialog of Better Dairying; Some Factors Affecting Fertility of Dairy Animals; Efficiency in Milk Plant Equipment and Operation; Sterilizing Dairy Utensils; The Dairyman's Dollar; Dairy Farm Operations; Butter Price Curve Outlook; and Market News in the Dairy Industry, include the various topics which were given special portrayal and were outstanding in their wealth of information.

National Dairy Council Display

The National Dairy Council had a large and exceedingly beautiful and instructive exhibit, designed to picture the value and necessity of milk and other dairy foods in the diet. The exhibits were instructive, practical, useful and modern and the lessons shown were worthy of special consideration.

The display included exhibits emphasizing Ice Cream—an International Food Dessert; Four H Club Girls Health Food Shows; A Health Food Show in Nutritional Projects for Girls' Clubs; Quality Improvement, Clean Surroundings, Proper Methods; Health Habits, Clean Production, Safe Distribution; Butter Builds Better Bodies; Cheese is a Nutritional Food; Consumption of Milk Promotes Growth and Builds Reserve.

The Cattle Show

Upwards of nine hundred cattle of the various dairy breeds comprised an outstanding exhibit. These involved the Jersey, Holstein Friesian, Guernsey Ayrshire and Brown Swiss breeds.

Many of the exhibits were of extremely high type and came from many different sections of the country.

4 H Club Work

Several hundred 4 H Club boys and girls competed for honors at the Tri-State Fair. These contests included the entire scope of the 4 H Club work. There was a large display of 4 H cattle

Eleventh Annual Meeting Inter-State Milk Producers Association

Plans for the coming annual meeting of the Inter-State Milk Producers' Association have been completed.

Eleven years of successful cooperative endeavor have marked the association's work in a progressively complete marketing program. Cooperation with other agencies in production and distribution has been a feature of its policy. Its

Council and for general business. Special addresses will also be made at this session by J. W. Jones, U. S. Dept. of Agr. and Hon. R. G. Bressler, Deputy Secretary of Agriculture for Penna.

MEETING FOR THE LADIES

A specially planned program has been arranged for the ladies of the members attending the annual meeting. The morning session will be held in the offices of the Inter-State Milk Producers' Association on Monday, November 28th, at 10:30 o'clock. Details of the program will be found on page 8 of this issue of the Milk Producers' Review.

Luncheon will be served the ladies by the Nutrition Department of the Dairy Council.

ANNUAL BANQUET

The annual banquet of the association will be held at the Benjamin Franklin Hotel, Monday evening, November 28th, in the Hotel Ball Room, promptly at 6:00 P. M. The usual cost per plate, \$2.50 will apply.

DAIRY COUNCIL ENTERTAINMENT

As has been the usual custom, the Philadelphia Inter-State Dairy Council will present some of its newest offerings as entertainment. The program will include two numbers, for the purpose of increasing the knowledge of consuming public as to the value of dairy products in the diet.

TUESDAY'S SESSION

The plans include early morning visits to the milk distribution plants of the local milk dealers. The various plants will be visited by groups.

Members should advise the secretaries at the registration headquarters of their selection of plants so that definite plans for the various visits may be made.

These trips will leave the hotel headquarters at 8:00 A. M. The plants to be visited include one of Supplee-Wills-Jones Milk Plants, the Supplee-Wills-Jones Ice Cream Plant, one of the Abbotts Alderney Dairies Milk Plants, the Abbotts Alderney Dairies Ice Cream Plant, Harbisons Dairies, Dolfigers Dairies and Scott-Powell Dairies.

Special guides will be provided to conduct members to the various plants.

TUESDAY'S BUSINESS SESSION

The general educational session on Tuesday, November 29, will convene as usual promptly at 10:30 A. M. This session is open to the public and a general invitation is extended for all interested to attend.

The addresses will be by nationally known leaders in their chosen fields of work.

T. E. Woodward, Superintendent of the U. S. Bureau of Dairying Experimental farm at Beltsville, Maryland, will talk on some essential factors in efficient production.

Dr. Theodore Appel, Secretary of Health of Pennsylvania, will discuss the important steps in a safe milk supply.

(Continued on page 7)

You Are Wanted

— AT THE —

Eleventh Annual Meeting

— OF THE —

Inter-State Milk Producers' Association

NOVEMBER 28th and 29th, 1927

BENJAMIN FRANKLIN HOTEL
PHILADELPHIA

It is your meeting. Be sure to attend personally or be represented by some one who can vote your signed proxy.

If no one has been officially delegated from your local to attend these meetings, send your signed proxy, in advance of the meeting, direct to the office of the Inter-State Milk Producers' Association, Boyertown Building, Philadelphia. A blank proxy form may be found on page 3 of this issue of the Milk Producers' Review.

Proxies need only be signed by the member and the signature witnessed. Other information regarding number of shares, etc., can be supplied by the home office. No revenue stamps need be affixed to proxies.

The Annual Meeting of the Inter-State Milk Producers' Association is the members meeting. Make an effort to attend and get first hand information as to its methods and plans for the future.

Annual Banquet, November 28th
6:00 P. M.

club exhibits as well as in the other fields of the class of work. Teams representing club and vocational school activities were present from Pennsylvania, New Jersey and Maryland.

Butter and Cheese Awards

The Gold Medal for Creamery Butter was awarded to A. W. Dalsgaard, Eagle Bend, Minnesota, with a score of 95. C. N. Hansen, Champaign, Illinois, won second prize with a score of 94.75.

Silver medals were awarded each contestant in the different states for scores of 92 and better and each exhibitor scoring 92, who did not receive a medal, was given a diploma.

The Gold Medal for American Cheese went to Martin Kubitz, Elgar, Wisconsin, with a score of 95.50. Fred Winkler, Augusta, Wisconsin, won the silver medal, with a score of 95.25.

motto has been a safe and adequate supply at a fair price to both producer and consumer.

The various sessions of the Eleventh Annual Meeting will be held at the Benjamin Franklin Hotel, 9th and Chestnut Streets, Philadelphia, Pa.

MONDAY'S SESSIONS

The session on Monday morning will be executive in nature. Members of the association and invited guests alone being admitted.

At this meeting will be presented the reports of the various officers of the association. Reports of the auditors and the election of directors to fill expiring terms, will be held.

The afternoon session will be given over to the President's annual report of the Association's activities, reports of the Philadelphia Inter-State Dairy

Inter-State Basic and Surplus Plan for 1928 WITH DETAILED EXPLANATIONS

By **H. D. ALLEBACH**
President

Inter-State Milk Producers Association

The following is an application of our method of determining producers' basic and surplus quantities to apply for the remainder of 1927 and for the year 1928:

1.—That the present basic quantity of all farmers shipping to cooperating dealers shall be used in making payments for the remainder of 1927.

NOTE:—For instance if your present basic quantity is 3500 pounds you will be paid basic price for those 3500 pounds during October, November and December, 1927. Anything produced above that amount will be surplus. Only class one surplus prevails during these three months.

EXAMPLE—October, November and December, 1927.

4400 lbs.—Production of Mr. Brown in October, November or December, 1927.
3500 lbs.—Basic quantity of Mr. Brown in 1927.

900 lbs.—Amount of surplus milk of Mr. Brown for October, November or December, 1927.

or
2750 lbs.—Production of Mr. Smith for October, November or December, 1927.
6000 lbs.—Basic quantity of Mr. Smith.

No milk of Mr. Smith paid for at surplus price for October November or December, 1927.

2.—That to determine basic quantities to be used for payment of milk purchased during 1928, the following method shall apply, except in cases, where special arrangements have already been made by individual buyers. Determine the average quantity shipped by each producer during October, November and December, 1927, and add to this average the present basic quantity of each producer, dividing by two the sum obtained.

NOTE:—Suppose your present basic amount is 3500 pounds. You have produced in October, 5500 pounds, in November 4500 pounds and in December 5200 pounds which will give you a total of 15,200 pounds. You will add to the average of this, which is 4400 pounds, 3500 pounds which is your present basic and divide this sum (7900 pounds) by two, or your basic amount for 1928 will be 3950 pounds.

Examples for 1928 Basic

3500 lbs.—Production of Mr. Brown for October, 1927.
4500 lbs.—Production of Mr. Brown for November, 1927.
5200 lbs.—Production of Mr. Brown for December, 1927.

3)13200 lbs.—Total production of Mr. Brown for Oct., Nov., and Dec., 1927.

4400 lbs.—Average production of Mr. Brown for Oct., Nov., and Dec., 1927.
3500 lbs.—Basic of Mr. Brown for 1927.
4400 lbs.—Average production of Brown for Oct., Nov., and Dec., 1927.

2)7900 lbs.

3950 lbs.—Basic quantity of Brown for 1928.

* * * * *

On the other hand if Farmer Smith having had a basic of 6000 pounds established in 1926 and producing as follows:

3000 lbs.—Production of Mr. Smith for October, 1927.
2500 lbs.—Production of Mr. Smith for November, 1927.
2750 lbs.—Production of Mr. Smith for December, 1927.

3)8250 lbs.—Total production of Mr. Smith for three months.

2750 lbs.—Average production of Mr. Smith for Oct., Nov., and Dec., 1927.
6000 lbs.—Basic of Mr. Smith for 1927.
2750 lbs.—Average of Mr. Smith for Oct., Nov., and Dec., 1927.

2)8750 lbs.

4375 lbs.—Basic quantity of Mr. Smith for 1928

3.—Every producer whose herd is tested for tuberculosis after January 1, 1927, shall be paid in accordance with his present basic quantity for the balance of 1927 and during the year 1928, except when the producer prefers to have his basic quantity determined in accordance with Section two.

NOTE:—If your present basic quantity is 7000 pounds and you have had your cows tested for tuberculosis after January 1st, 1927, you are entitled to that present basic amount during 1928, except when producers prefer to be paid in accordance with paragraph 2 explained above.

Example

Mr. Jones having had a basic of 7000 pounds and producing as follows:
3000 lbs.—Production of Mr. Jones for October, 1927.
4000 lbs.—Production of Mr. Jones for November, 1927.
5000 lbs.—Production of Mr. Jones for December, 1927.

3)12000 lbs.—Total production of Mr. Jones for the three months

4000 lbs.—Average production of Mr. Jones for Oct., Nov., and Dec., 1927.
7000 lbs.—Basic for Mr. Jones for 1927.

Farmer Jones is entitled to his basic of 7000 pounds and should notify the office of the Inter-State Milk Producers' Association before January 15th, 1928, that he desires to continue with his basic of 1927 or his new basic will be calculated as in the case of Farmers Brown and Smith.

4.—Any new shipper starting after October 1, 1927, is to be paid on a basis of 70% basic and 30% surplus of each month's shipment during the balance of

1927. During 1928 he shall be allowed a basic quantity determined by taking 70% of the average amount shipped during October, November and December, 1927.

NOTE:—For instance new shipper starting after October 1st, makes a basic quantity of 4000 pounds in the month of October; his basic quantity for that month will be 2800 pounds. The balance will be surplus price. During November he produced 5000 pounds; his basic quantity will be 3500 pounds and the balance will be surplus and paid the surplus price. For December he makes a production of 6000 pounds, his basic quantity will be 4200 pounds and the balance surplus. His basic quantity for 1928 will be 70% of the average of these three months. The sum of 4000 pounds, 5000 pounds and 6000 pounds is 15000 pounds and this divided by three will give him an average of 5000 pounds and 70% of 5000 give him 3500 pounds as his basic amount for 1928. Anything produced by him above this amount during 1928 will be surplus.

Example

4000 lbs.—Production of Mr. Miller for October, 1927.
70—Percentage paid for at basic price.

2800 lbs.—Amount of Mr. Miller's milk for October paid for at basic price.
5000 lbs.—Production of Mr. Miller for November, 1927.
70—Percentage paid for at basic price.

3500 lbs.—Amount of Mr. Miller's milk for November to be paid for at basic price.
6000 lbs.—Production of Mr. Miller for December, 1927.
70—Percentage paid for at basic price.

4200 lbs.—Amount of Mr. Miller's milk for December to be paid for at basic price.
4000 lbs.—October production.
5000 lbs.—November production.
6000 lbs.—December production.

3)15000 lbs.

5000 lbs.—Average of Mr. Miller's milk for Oct., Nov., and Dec.
70—Percentage of average of total production.
3500 lbs.—Basic quantity for Mr. Miller for 1928.

4A.—In the case of a shipper starting to ship after January first, 1927, and one who has taken on a basic of less than 70% basic and thirty percent surplus on and after October first and continuing through November and December, he shall be paid 70% basic and 30% surplus. His basic for 1928 shall be established by taking his full production for October, November and December, 1927, added to 70% of his full production for that period and divided by two.

NOTE:—Suppose you started in May, being paid each month for 50% of your milk at basic price and 50% at surplus. On October 1st, you will be put on a 70-30 basis for October, November and December.

Suppose during October you produced 5000 pounds, during November 4500 pounds, and during December 4000 pounds. For October you would be paid for 3500 pounds at basic price. For November you would be paid for 3150 pounds and for December you would be paid basic for 2800 pounds.

To obtain basic quantity for 1928, add together the basic amounts for October, November and December, or 3500 pounds plus 3150 pounds plus 2800 pounds or 9450 pounds. Take 1-3 of this amount or 3150 pounds. Similarly take the average of your production for the three months or 4500 pounds. Add these amounts together—3150 plus 4500 or 7650 pounds. Half this amount—3825 pounds will give you the basic quantity upon which payments will be made to you during 1928.

Example

5000 lbs.—Production of Mr. Myers for October.
70—Percentage of production in October.

3500 lbs.—Amount paid for at basic price in October.
4500 lbs.—Production of Mr. Myers for November.
70—Percentage of production for November.

3150 lbs.—Amount paid for at basic price for November.
4000 lbs.—Production of Mr. Myers for December.
70—Percentage of production for December.

2800 lbs.—Amount paid for at basic price for December.
5000 lbs.—Total production for October.
4500 lbs.—Total production for November.
4000 lbs.—Total production for December.

3)13500 lbs.—Total production for Oct., Nov., and Dec.

4500 lbs.—Average monthly production for Oct., Nov., and Dec.
3500 lbs.—Amount paid for at basic price for October.
3150 lbs.—Amount paid for at basic price in November.
2800 lbs.—Amount paid for at basic price in December.

3)9450 lbs.

3150 lbs.—Amount paid for at basic price for Oct., Nov., and Dec.
4500 lbs.—Amount total production during Oct., Nov., and Dec.

2)7650 lbs.—Total
3825 lbs.—Basic of Farmer Myers for 1928.

5.—Any new producer starting after January 1, 1928, shall establish a basic quantity for that year according to agreement.

OFFICIAL NOTICE ELEVENTH ANNUAL MEETING OF THE STOCKHOLDERS

Inter-State Milk Producers' Ass'n Monday and Tuesday, November 28th and 29th, 1927

At the Benjamin Franklin Hotel
9th and Chestnut Streets, Philadelphia, Pa.
BUSINESS SESSION, MONDAY AT 10.00 A. M.

In accordance with the By-Laws, the Stockholders of the Inter-State Milk Producers' Association will meet at the Benjamin Franklin Hotel, 9th and Chestnut Streets, Philadelphia, Pa., Monday morning, November 28th, 1927, at 10.00 A. M., for the purpose of filling vacancies in the Board of Directors, Hearing Reports of Officers and for the transaction of such business as may be necessary.

H. D. ALLEBACH, President
R. W. BALDERSTON, Secretary

PROGRAM

10.00 A. M. Election of Directors
Reports of Officers and Auditors
Report of Testing Department

2.00 P. M. President's Annual Address
Address—J. W. Jones, U. S. Dept. of Agr.
Discussion of Market Conditions
Address—Hon. R. G. Bressler, Deputy Sect'y of Agriculture for Penna.

SPECIAL ENTERTAINMENT FOR THE VISITING LADIES

Beginning at 10.00 A. M.

At Association Headquarters, Boyertown Building, 1211 Arch Street, Philadelphia

ANNUAL BANQUET

Benjamin Franklin Hotel

NOVEMBER 28th, 1927, at 6.00 P. M.

11th Anniversary Program Special Entertainment New Dairy Council Plays
BANQUET TICKETS \$2.50

TUESDAY, NOVEMBER 29th, 1927

8.00 A. M. Visits to Local Milk and Ice Cream Plants
Visits to Offices of the Inter-State Milk Producers' Association and Philadelphia Inter-State Dairy Council.

10.30 A. M. General Public Session.
Addresses—1. T. E. Woodward, Supt. U. S. Bureau of Dairying, Experiment Farm, Beltsville, Md.
2. Lloyd S. Tenny, Chief Bureau of Agr. Economics, U. S. Dept. of Agr.
3. Theodore Appel, M.D., Secretary of Health, Commonwealth of Pa.

PROXY FOR STOCKHOLDERS INTER-STATE MILK PRODUCERS' ASSOCIATION INCORPORATED 1917

REGISTERED
WITH
CORPORATION TRUST COMPANY OF AMERICA
WILMINGTON, DELAWARE

PROXY
STOCKHOLDERS' MEETING

Know All Men by These Presents,

That I, the undersigned, being the owner of

shares of the capital stock of the corporation above named, do hereby constitute and appoint

My true and lawful attorney in my name, place and stead, as my proxy, at the annual meeting of the stockholders of the said corporation to be held in the Benjamin Franklin Hotel, 9th & Chestnut Sts., Philadelphia, Pennsylvania, on the Twenty-eighth day of November, 1927, and on such other day as the meeting may be thereafter held by adjournment or otherwise, according to the number of votes I am now or may then be entitled to cast, hereby granting the said attorney full power and authority to act for me and in my name at the said meeting or meetings, in voting for directors of the said corporation or otherwise, and in the transaction of such other business as may come before the meeting, as fully as I could do if personally present, with full power of substitution and revocation, hereby ratifying and confirming all that my said attorney or substitute may do in my place, name and stead.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this

day of

, 1927.

Witness:.....(Seal)

.....(Seal)

INTER-STATE MILK PRODUCERS REVIEW

Official Organ of the
Inter-State Milk Producers' Association, Inc.

August A. Miller, Editor and
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Frederick Shangle, Advertising Manager
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1879.



The Eleventh Annual Meeting of the
Inter-State Milk Producers' Association
will be held at the Benjamin Franklin
Hotel, 9th and Chestnut Streets, Phila-
delphia, Pa., November 28th and 29th.

This meeting represents a gathering
of the members and delegates from the
local units of the organization. A rep-
resentation of the folks back on the
farm, the producers of milk in the Phila-
delphia Milk Shed.

It is particularly a meeting of the
membership, gathered together to rep-
resent over 20,000 milk producers. To
hear the reports of the officers of the
association, to elect directors whose
terms have expired and to help in plan-
ning the program for the future conduct
of the organization.

Every member or his delegated rep-
resentative has a duty to perform and
that is to be present and to participate
in the official business of the annual
meeting.

Delegates from the Local Units should
carry the message from their local or-
ganizations to this meeting and in turn
should report the deliberations of the
annual meeting to the local organiza-
tions.

The Annual Banquet of the associa-
tion will be held at the Benjamin Frank-
lin Hotel, on Monday evening, Novem-
ber 28th. The Philadelphia Inter-State
Dairy Council will provide entertain-
ment, characteristic of its educational
program.

Make your plans to attend this
annual meeting now—and if your Local
Unit has not yet selected its delegate
see that it is done at once.

Cooperation is a great thing, not alone
among the farmers, but in many other
lines of endeavor.

Just recently Governor Fisher of
Pennsylvania has urged greater coopera-
tion between many of the important de-
partments and various state boards in
the Keystone State.

"It is desirable," Governor Fisher is
reported as saying, "that all departments,
boards and commissions of the State
government, take full advantage of the
authority conferred upon them to co-
ordinate their work. I am particularly
anxious to have departments, boards and
commissions whose functions involve the
inspection of the same premises for any
purpose whatsoever work out a program
of cooperation so as to avoid overlapping
and conflicting orders.

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Such cooperative endeavor will save
expense, confusion and needless irrita-
tion to those affected.

Farmers especially have been put to
much bother by State inspectors of
cattle, inspectors of butterfat in milk
and sanitary inspectors who have called
at their farms upon different days."

This cooperative movement is expect-
ed to avoid trouble in other departments
of State work as well as in the agricul-
tural field. The development of this
cooperative State development should, if
properly administered, prove of excep-
tional value in many directions.

Largest State Farm Products Show Planned

Plans for the largest mid-winter farm
products show ever held in the eastern
half of the United States were approved
recently by the State Farm Products
Show Commission.

The Show will be held in Harrisburg,
January 17, 18, 19, and 20, 1928, and
will cover more than 120,000 square feet
of floor space.

Twenty-eight organizations represent-
ing the extensive dairy, fruit, livestock,
poultry, farm crops, apiary and allied
industries of the State will hold meet-
ings during Show week and will encour-
age the exhibition of the finest crops and
livestock produced in Pennsylvania.

More than 200 baby beef and dairy
calves to be exhibited by the boys' and
girls' clubs of Cumberland, Dauphin,
Lebanon, Perry, Union and other coun-
ties, and exhibits and contests by more
than 300 boys and girls taking the voca-
tional agricultural instruction in the high
schools of Pennsylvania, will be among
the outstanding features of the coming
show.

Prize money, in addition to beautiful
cups and medals, will total \$10,000, more
than has been offered to exhibitors at
any of the previous eleven shows.

The State Farm Products Show Com-
mission in its recent meeting took favor-
able action on the report and recommen-
dations of the Show Committees which
represent the various farm and allied
organizations cooperating in the arrange-
ments for the twelfth annual exhibition.

Sanitary Regulations Modified

At a meeting of the Executive
Committee of the Philadelphia
Inter-State Dairy Council, held
in Philadelphia, on September
21st, 1927, Paragraph C-2, of
the Sanitary Regulations was
modified to read as follows:—
"All milk pails must be of bright
tin, free from rust and pro-
nounced dents and with smooth
seams soldered flush. The use
of small top milk pails is rec-
ommended."

Note:—This modification of
the Sanitary Regulations re-
moves the absolute use of the
closed top milk pail and Per-
manent Permits will be issued
after this date, when the ordi-
nary type of pail is used.

Market Conditions

Moderate weather, during the past
month has been favorable both from
the standpoint of production and con-
sumption. The supply however, has
been somewhat in excess of the con-
sumptive demand for fluid milk. In
some of the outlying cities and towns
there has been about a normal supply
for the season.

October Milk Prices

Grade B market milk, three per cent
butterfat content (basic quantity aver-
age), delivered f. o. b. Philadelphia, dur-
ing October is quoted at \$8.29 per
hundred pounds.

The price of basic milk (basic quan-
tity average) three per cent butterfat
content, delivered at Receiving Stations
in the 51-60 mile zone, during October,
is quoted at \$2.71 per hundred pounds.
The usual butterfat differentials and
freight rate variation applying at other
mileage points in the territory, as shown
by quotations on page 5, in this issue of
the Milk Producers' Review.

The price of Class I surplus milk, for
October, three per cent butterfat con-
tent, at all Receiving Stations, is \$1.90
per hundred pounds. For f. o. b. Phila-
delphia delivery the price for Class I
surplus milk is quoted at \$2.48 per
hundred pounds or 5.55 cents per quart.

October Butter Market

The butter market has been a bit
feverish almost throughout the month.
Prices have not made any sharp fluctua-
tions, but have been more or less easy.
The full range of quotations has not
been over two cents a pound and most
of the fluctuations have been fraction-
able.

Storage surpluses have increased. On
October 22nd, total storage stocks of
butter in the United States were esti-
mated at 126,974,000 pounds as com-
pared with 109,716,000 pounds one year
ago, an increase of 17,258,000 pounds.

The month's prices of butter opened
with 92 score solid packed butter, New
York City, at 49 cents, in mid-month it
had receded to 48 cents, a slight upturn
brought the price back to 49 cents after
which there was a gradual decline,
reaching 48 cents at the close of the
month.

The average price of 92 score, solid
packed butter, New York City, on which
the October surplus price was computed
was 4853 cents per pound, as compared
to 4582 cents for the month of Septem-
ber.

H. D. Allebach, president of the Inter-
State Milk Producers Association, on the
approval of the Board of Directors, spent
one week assisting the Pure Milk Asso-
ciation of Chicago, Ill., in organizing its
membership. Meetings were held
throughout the Chicago Milk Shed. In
addition to Mr. Allebach, I. W. Heaps,
secretary treasurer of the Maryland
State Dairymen's Association, Baltimore,
Md., and B. F. Beach, assistant secretary
of the Michigan Milk Producers' Asso-
ciation, cooperated in putting on this
membership drive. Mr. Allebach spoke
at ten different meetings scheduled dur-
ing the week of October 24th to 29th.

Richard Pattee Dies

Richard Pattee, managing director of
the New England Milk Producers' Asso-
ciation, Boston, Mass., passed away on
November 6th, 1927, at his home at
Laconia, N. H., after a long illness.

Mr. Pattee was also active in the
organization and development of the
National Cooperative Milk Producers'
Federation, of which he was vice presi-
dent. He also served as chairman of the
Board of Trustees of the American
Institute of Cooperation. His loss will be
deeply felt by the cooperative interests
throughout the world.

Directors' Meeting

The regular bi-monthly meeting of the
Directors of the Inter-State Milk Pro-
ducers' Association was held at the Asso-
ciations headquarters in the Boyetown
Building, Philadelphia, Pa., on October
31st, 1927. A full board of Directors
was present. Those attending the meet-
ing included: H. D. Allebach, president;
Frederick Shangle, vice president;
Robert W. Balderston, secretary; Robert
P. Brinton, treasurer and S. K. Andrews,
J. H. Bennetch, Ira J. Book, E. H. Dono-
van, E. Nelson James, J. W. Keith, H.
I. Lauver, S. Blaine Lehman, A. R.
Marvel, I. V. Otto, F. P. Willits, E. R.
Pennington, J. A. Poorbaugh, C. F.
Preston, Albert Sarig, C. C. Tallman, R.
I. Tussey, Harry B. Stewart, S. U.
Troutman, F. M. Twining and A. B.
Waddington.

The minutes of the previous regular
meeting and the various minutes of the
meetings of the Executive Committee
were presented by the secretary, Robert
W. Balderston, and were approved. A
report of the expenditures since the last
meeting of the board was also presented
and approved.

Robert F. Brinton, treasurer, presented
a financial statement as to the associa-
tions worth, as of September 30th, 1927,
which was approved.

Frederick Shangle, chairman of the
Committee on Entertainment for the
Annual Meeting, made a detailed report
as to plans and program for the annual
meeting and banquet.

J. O. Eastlack, statistician, briefly out-
lined the progress of the system of statis-
tical records of the membership of the
association, which was progressing very
satisfactorily.

Considerable consideration was given
the matter of a proposed method of
reimbursing active local organizations
in the territory for expenditures incurred
in financing local meetings. After dis-
cussion this problem was referred to a
committee composed of Messrs. Preston,
Willits, Keith, Waddington and Otto.
This committee is to make a study of
the situation and to report at a later
meeting.

A study of market conditions was
presented by vice president Frederick
Shangle. The present supply of milk
appears quite adequate and in some
instances slightly in excess of the
demand. General market conditions on
the whole have been good and the out-
look looks favorable for the mainte-
nance of present conditions.

Field reports from the directors indi-
cated generally good conditions. Pro-
duction appeared to be on a satisfactory
basis. The tuberculin-testing of cows
still continues a dominant feature in
some districts.

F. M. Twining, in charge of testing,
weighing and membership work in the
field, made a detailed report of the opera-
tion of the work in that department,
while C. I. Cohee, director of the Quality
Control Department of the Dairy Coun-
cil announced several new features in
connection with the sanitary regulations.

F. P. Weaver, Prof. of Agr. Economics,
Penna. State College, made an interesting
address on the subject of Equitable
Division of Taxes. His remarks were
based upon a survey of assessments
made and of the taxes paid by city and
county tax payers and the equalization
of the rates between agriculture, mining,
the Public Utilities and the Personal In-
come taxpayer.

Leaves and trash which are burned
can add no humus to the soil; better
compost them.

November, 1927

MILK PRODUCERS' REVIEW

Page 5

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN

The basic price quoted below for October, 1927, is to be paid by cooperating dealers
on the average basic quantity established for each producer. For all milk bought in excess of
the basic amount, the surplus quoted below for the month of October is to be paid.
Beginning with January, 1927, the basic quantity will be established by using the higher
average basic quantity established in October, November and December of either 1925 or
1926.

These quotations are based on 3% butterfat milk and a differential of 4 cents for each
tent point and 2 cents for each half tent point up or down and are for all railroad points.
(Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES

This price list is issued with the understanding it is net to the producers and that all
buyers using it as a basis of payment to producers, shall in addition thereto make the follow-
ing contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts)
of all milk purchased from any producer at price listed hereon.

(2) To the Inter-State Milk Producers' Association 2c per 100 pounds (46½ quarts)
of all milk bought from members of said Association.

(3) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts)
of all milk bought from other producers at price listed hereon.

The funds so derived are to be used by the recipients for improving standards of quality
in production and distribution of milk in the Philadelphia Milk Shed; for improvement and
stabilization of markets, and for an educational campaign advertising the food value of dairy
products.

BASIC PRICE

October

F. O. B. Philadelphia

GRADE B MARKET MILK

Test per cent	Price per qt.	Price per 100 lbs.
3.05	\$3.29	7.11
3.1	3.31	7.15
3.15	3.35	7.2
3.2	3.37	7.25
3.25	3.39	7.3
3.3	3.41	7.35
3.35	3.43	7.4
3.4	3.45	7.45
3.45	3.47	7.5
3.5	3.49	7.55
3.55	3.51	7.6
3.6	3.53	7.65
3.65	3.55	7.65
3.7	3.57	7.65
3.75	3.61	7.75
3.8	3.63	7.8
3.85	3.65	7.85
3.9	3.67	7.9
4	3.69	7.95
4.05	3.71	8
4.1	3.73	8.05
4.15	3.75	8.1
4.2	3.77	8.15
4.25	3.79	8.2
4.3	3.81	8.25
4.35	3.83	8.3
4.4	3.85	8.35
4.45	3.87	8.4
4.5	3.89	8.45
4.55	3.91	8.5
4.6	3.93	8.55
4.65	3.95	8.6
4.7	3.97	8.65
4.75	3.99	8.7
4.8	4.01	8.75
4.85	4.03	8.8
4.9	4.05	8.8
4.95	4.07	8.8
5	4.09	8.8

When milk is not tested, the price f. o. b.
Philadelphia is 8 cents per quart.

OCTOBER SURPLUS PRICE

F. O. B. Philadelphia

Test per cent	per 100 lbs.	per qt.
3.05	\$2.48	5.35
3.1	2.50	5.35
3.15	2.52	5.4
3.2	2.54	5.45
3.25	2.56	5.5
3.3	2.58	5.55
3.35	2.60	5.6
3.4	2.62	5.65
3.45	2.64	5.65
3.5	2.66	5.7
3.55	2.68	5.75
3.6	2.70	5.8
3.65	2.72	5.85
3.7	2.74	5.9
3.75	2.76	5.95
3.8	2.78	6
3.85	2.80	6.05
3.9	2.82	6.1
3.95	2.84	6.15
4	2.86	6.2
4.05	2.88	6.25
4.1	2.90	6.3
4.15	2.92	6.35
4.2	2.94	6.4
4.25	2.96	6.45
4.3	2.98	6.5
4.35	3.00	6.55
4.4	3.02	6.6
4.45	3.04	6.65
4.5	3.06	6.7
4.55	3.08	6.75
4.6	3.10	6.8
4.65	3.12	6.85
4.7	3.14	6.9
4.75	3.16	6.95
4.8	3.18	7
4.85	3.20	7.05
4.9	3.22	
4.95	3.24	
5	3.26	
	3.28	

NOVEMBER PRICES

Inter-State Milk Producers' Association
The price paid for basic milk during
November, will, subject to market conditions,
be the same price as quoted for October,
1927. The basic quantity will be established
by using the higher of the 1925 or 1926
established basic amounts. Milk shipped in
excess of the basic amount will be paid for
by cooperating dealers as surplus milk, based
on the average price of 92 score, solid packed
butter, New York City, plus 20 per cent for
the month.

BASIC PRICE

October

Grade B Market Milk

Quotations are at railroad points. Inland

stations carry differentials subject to local

arrangements.

Prices are less freight and receiving

station charges.

Freight Rates

100 lbs. 3% milk

Price

per 100 lbs.

per qt.

per 100 lbs.

per qt.

per 100 lbs.

per qt.

per 100 lbs.

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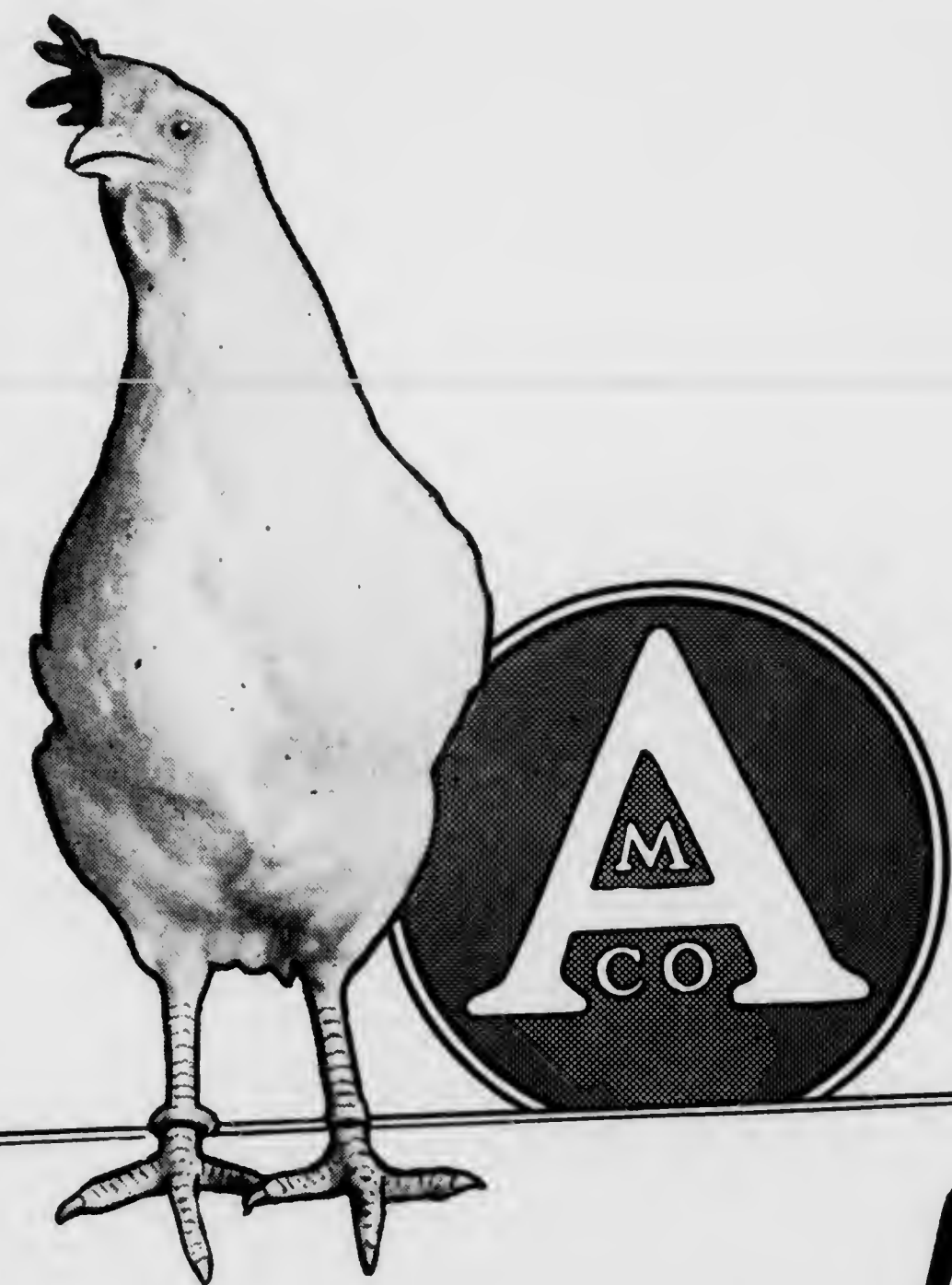
per qt.

per 100 lbs.

per qt.

per 100 lbs.

per qt.



173 EGGS!
a new world's record
for
continuous production
on

AMCO EGG MASH

ONE hundred and seventy-three eggs is the new world's record for continuous egg production set by Lady Amco of Norfolk on October 18. The former record was 149 eggs. It is quite possible that Lady Amco will better her present record and continue laying without interruption for some time yet. Lady Amco is a White Leghorn from line bred, trap nested stock, owned by A. R. Lander of Norfolk, Neb. She made her remarkable record in the Amco Egg Laying Contest at Omaha, Nebraska, on AMCO EGG MASH. Her 166th egg was sent by air mail to the White House for President Coolidge's breakfast. Lady Amco is in perfect condition, showing that all her needs for body maintenance, as well as production, were fully supplied by AMCO EGG MASH. Your Amco Agent can supply you with AMCO EGG MASH. The formula is public. And the price will save you money!

DIVISION OFFICE: MUNCY, PA.

AMCO
FEED MIXING SERVICE

AMERICAN MILLING COMPANY
EXECUTIVE OFFICES: PEORIA, ILL.

Plants at: PEORIA, ILL. OMAHA, NEB. OWENSBORO, KY.
Alfalfa Plants at: POWELL, GARLAND, AND WORLAND, WYO.

Corn Borer Continues to Spread

Cleaning up all corn stubble, stalks and cobs in the fields last spring before the 1927 corn crop was planted has proven a great aid in combatting the European corn borer, according to officials of the Pennsylvania Department of Agriculture who have just returned from an inspection trip through the heavily infested areas of Ohio, Michigan, Pennsylvania and Ontario, Canada. Counts of degrees of infestation in Michigan, Ohio, New York and Pennsylvania indicate that the increase in degree of infestation so far this year over 1926 is much less than the increase in 1926 over 1925.

The corn borer, however, is continuing its spread and reports from scouts up to September 10 indicate the corn borer is present in 386 townships of Michigan, Ohio, Pennsylvania, New York and Indiana, outside the quarantine area of the past year. This figure includes 48 townships in Pennsylvania located in the following counties: Monroe, Wayne, Lackawanna, Luzerne, Wyoming, Columbia, Northumberland, Union, Huntingdon, Bedford, Somerset, Greene, and Fayette. All or parts of these counties will be included when the new quarantine is placed.

Progress is reported in the work of introducing corn borer parasites from foreign countries. Twelve different species of parasites have been introduced from France, Italy, Hungary and Belgium. These in addition to those reared in this country have made it possible to liberate almost 2,000,000 in the infested areas of the United States. A total of 22,670 of three different species have been liberated in Pennsylvania. Of the twelve species liberated six have been recovered in numbers to indicate their permanent establishment in the field.

One of the interesting experiments observed by Department officials on their inspection trip was stalks of corn growing at the Michigan experiment station which were resistant to the attacks of the corn borer. These plants were from a very hardy variety of corn introduced from South America.

Since cleaning up all corn remnants in the field is proving a valuable aid in reducing the ravages of the corn borer, the Pennsylvania Department of Agriculture is mailing to every farmer in the heavily infested area a leaflet which gives suggestions on what farmers can do this fall to meet government inspection requirements next spring and save time, worry and expense.

It is explained that the present regulations require that all corn stubble, and other corn remnants on land subject to overflow from any river must be removed or destroyed prior to December 1 this year.

Important Points On Area T.B. Test Printed

"Important Points for Each Cattle Owner Whose Herd Has Been Tuberculin Tested Under the Modified Accredited Area Plan" is the title of an eight-page pamphlet which is now being distributed by the Bureau of Animal Industry, Pennsylvania Department of Agriculture.

Facts regarding removal of reactors, appraisal, salvage, post mortem, inspection of reactors, infected premises, sanitation and the quarantine regulations, are given in this publication.

Agriculture Showing Marked Improvement Over Year Ago

Marked improvement in the farm situation as compared with this time a year ago is reported by the Bureau of Agricultural Economics, United States Department of Agriculture, in its November 1 report.

The bureau's index of purchasing power of farm products in terms of non-agricultural products is placed at 92 for September, compared with 88 in August, the 1909-14 five-year period being used as a base of 100. The rise was due primarily to the advance in prices of cotton, dairy products, and poultry products during the month.

"Conditions in general," says the report, "are rather reversed from last year. The cotton belt, the northern wheat belt, the cattle States, the north-western apple districts are all in better shape. Some sections like the eastern corn belt and certain potato areas are perhaps not in as good shape, but the general balance as between the major lines of production is better than last year. There are no conspicuous surpluses nor shortages. Crop production per capita of population is next to the smallest in 33 years."

Cotton and corn this year are attributed by the bureau with having played an important part in the more stabilized situation. The cotton crop is approximately a third smaller than last year, according to October estimates, and cotton prices more than a third higher.

There is about an average supply of corn this year, and although corn prices are not entirely satisfactory to the cash corn grower, says the bureau, prices are still favorable to the livestock industries. There is considerably more corn than was expected, though the crop is a disappointment in the eastern corn belt. Corn is not finally sold off the farms as corn, but is a raw material sold chiefly as animal products. A corn failure such as appeared possible at one time during the summer would have seriously handicapped livestock feeders, whereas an excessive surplus would have given undue impetus to the expansion of pig production during the coming year.

Report of the Quality Control Department, Philadelphia Inter-State Dairy Council.

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of September, 1927.

No. Inspections Made..	2,372
No. Sediment Test ...	2,696
No. Meetings Held	2
Attendance	230
No. Miles Traveled	18,083
No. Man Days, Fairs and Exhibits	143
No. Temp. Permits issued up to September 31st, 1927	23,820
No. Permanent Permits issued up to September 31st, 1927	10,023
During the month 40 dairies were discontinued from selling for failure to comply with the regulations—37 of which were reinstated before the month was up. To date 82,384 farm inspections have been made.	

Uncle Ab says that work is the best cure for the blues.

Eleventh Annual Meeting Inter-State Milk Producers Ass'n

(Continued from page 1)
Lloyd E. Tenny, Chief, Bureau Agr. Economics, Washington, D. C., will speak on the service which his bureau can render to our cooperative dairymen.

INFORMATION TO MEMBERS AND DELEGATES

A registration desk will be provided at the Benjamin Franklin Hotel, 9th and Chestnut Streets, where every member, delegate or guest should register at once and receive proper credentials. Secretaries will be in attendance to enable proper checking of members proxies. No revenue tax will be required on proxies this year.

The Benjamin Franklin Hotel, is located six blocks from the Pennsylvania Railroad, Broad Street Station and four blocks from the Philadelphia and Reading Railroad Terminal Station.

If you travel by automobile, satisfactory garages may be found nearby the hotel. Parking on city streets in the vicinity of the hotel or in the immediate business section of the city is not permitted.

HOTEL RESERVATIONS

Arrangements for hotel reservations can be made through the office of the I. S. M. P. A. for delegates and members at the Benjamin Franklin Hotel. A special rate for members and delegates has been made by the Benjamin Franklin Hotel. Single rooms with bath at \$4.00 per day; double rooms for two people at \$6.00 per day; special suites of two large connecting rooms with bath between, four to six persons to each room, separate beds, at the rate of \$2.50 per person per day. Made your reservations at once. Communicate with Frederick Shangle, chairman of the Entertainment Committee, Boyertown Building, Philadelphia, who will secure your reservations.

THE MEMBERSHIP AT LARGE

Members should make every possible effort to attend this annual meeting of the Inter-State Milk Producers Association. It will assist you in obtaining a clearer knowledge of the cooperative work that has been done. It will enable you to better visualize the associations problems. It will broaden your vision of cooperation and it will give you a glimpse of the possibilities for the future of the association. The occasion is an unusual opportunity to meet fellow members from other sections and compare notes.

Report of the Field and Testing Department Inter-State Milk Producers' Association.

The following statistics show the aggregate operations of all the Inter-State Milk Producers' Association field men in connection with testing, weighing and general membership work, for the month of September, 1927.

No. Tests Made	7362
No. Plants Investigated..	90
No. Membership Calls ..	239
No. New Members	
Signed	81
No. Cows Signed	608
No. Transfers Made	18
No. Meetings Attended..	20
No. Attending Meetings..	1199

Advocates Dairy Improvement Program

By DR. C. W. LARSON, Chief of Bureau of Dairy Industry, United States Dept. of Agriculture

A national dairy improvement program for increasing production at reduced costs is needed today. This proposed program would not only solve a national problem of meeting the demand for an adequate milk supply, but also develop more contented and satisfied farmers.

There are 22,000,000 dairy cows on the 4,500,000 farms of the nation, making the average herd number less than six cows. The average cow now produces 4,500 pounds of milk and 180 lbs. of butterfat per year, which is "too low." Consumption of milk per person has increased from 43 gallons in 1920 to 55.3 gallons in 1926, while population has increased almost 2,000,000 persons per year.

As a matter of fact the dairy industry is not keeping up with this increased demand for dairy products. For each year's increase in population we need an additional 440,000 cows. On January 1, 1926, however, there were 330,000 fewer cows than on the preceding January 1, and on January 1st of this year the number was 324,000 less than last year.

Oddly enough the total production of milk has not decreased in this period. The increased demand being met partly by increased production per cow and partly by converting a smaller percentage of milk into manufactured products.

Through selection, feeding and breeding the 360,000 cows affected by the cooperative cow-testing movement have "speeded production" until today, the average cow in these associations produces 7,500 pounds of milk per year.

High producing cows are economical in the use of feed. A tabulation of more than 100,000 individual cow records shows that cows producing 9,000 pounds of milk per year did not eat twice as much as cows that produced 4,500 pounds. Instead they ate approximately 40 per cent more feed in dollars worth of feed per cow to produce twice as much milk and butterfat. Another tabulation shows that the cows in the 9,000 pound production class ate only about 40 per cent more digestible nutrients than cows that produced half as much.

Not more cows but better ones will thus meet the increasing demand for milk. As a matter of fact, if we were to increase the production of the average cow only 100 pounds per year for the next forty years we could supply our increase in population without increasing the number of cows. Cow testing has been in operation in this country for twenty years but only two per cent of our cows are now under test. When it is realized that some such method is the only one that will show results, it should be more generally used.

Build for Future

Now is the time to do those agricultural engineering jobs around the farm which will make the business more profitable and home life more enjoyable. A line of tile to that wet spot in the otherwise highly productive field will be valuable and that septic tank anticipated for some time will improve the sanitary conditions around the house.

WHY USERS of Purity Strainers GET GRADE "A" TESTS

It Strains Milk ABSOLUTELY CLEAN

Absolutely clean milk grades higher and means more money for the producer. Unless milk is CLEAN it will not test Grade "A", regardless of its percentage of butterfat.

Dr. Clark's Purity Strainer with its sterilized cotton disc clamped on the bottom is the ONE strainer guaranteed to strain your milk 100% Clean. No other strainer can compare with PURITY for simplicity and real efficiency. That's why they are used by thousands of farmers, creameries and large condenseries. Sold by good dealers everywhere. Made in two sizes—10 qt. and 15 qt.

10 Day Trial Test
Write at once for our 10 Day Trial Test Offer. Find out how you can test the PURITY strainer and get your money back if it doesn't remove every particle of dirt, dust and sediment from your milk. We will send complete particulars of our "10 Day Trial Test Offer" by return mail.

PURITY STAMPING CO.
Dept. F4 Battle Creek, Mich.

Purity MILK STRAINER

WHITEWASH WITH WARNER'S

"LIMOID"

Healthy cows to give pure milk must have clean, fresh, sanitary stables.

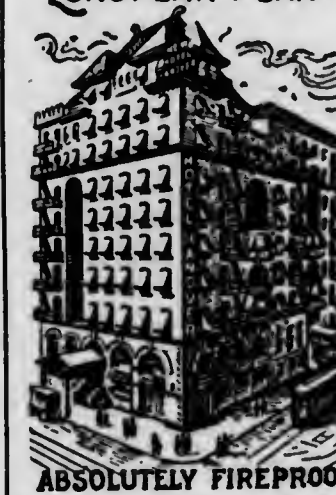
Mix water and Warner's Limoid to proper consistency and you have a perfect whitewash which will spread nicely with a brush or can be sprayed without clogging nozzles.

Sold in 10-lb. and 50-lb. paper bags. "Limoid" can be stored indefinitely without deterioration or fire risk. Ask your dealer or write direct.

Charles Warner Company

ODD FELLOW BLDG.  WILMINGTON, DEL.

EUROPEAN PLAN



The HOTEL HANOVER

ARCH STREET at TWELFTH PHILADELPHIA, PA.

One Block from Reading R. R. Two Blocks from Penna. R. R.

Rooms \$2.00 and Up
Special Luncheon \$.50 Special Dinner \$1.00

W. C. FONTAINE, Pres. & Mgr.



5.36% Butterfat!
It means PROFIT!!

More Butterfat Means More Profit

All purebred Jerseys tested during the past 24 years average 5.36% butterfat. Think what this means in terms of profit! Think what it would mean to your bank balance! Jerseys require less feed and produce the richest milk.

Send for valuable free booklet

The American Jersey Cattle Club

Dept. K. 324 West 23rd St., New York, N. Y.

TRADE MARK **NICE** REG. U.S.A.

THE NAME TO GO BY—WHEN YOU GO TO BUY PAINT AND VARNISHES

Write for color Cards and Booklet "Paint Pointers" EUGENE E. NICE COMPANY, Inc., PHILADELPHIA



"The Charm That Charms"

In July I had chatted with a farm woman on her porch. Now, at her invitation, I found myself one of a rollicking group in her home on Thanksgiving night.

Ever since the last morsel of pumpkin pie had vanished, the youngsters had made the farm house creak with their antics and ring with "Come Ye Thankful People Come" and songs of other vintage. From our corner in the front parlor we watched the fun.

"You must be tired," I said to my friend. "Holidays mean hard work."

"Well, yes, but that is worth it," she nodded toward the group of frolickers. "And my girl, Grace, helps me a lot at such times. She's fourteen now and always does so much for me when she gets home from school. Ferd, my ten-year-old, is a real willing youngster, too, though he's my baby and I like to have him get as much play time as he can after he helps his father with the chores. Both children are doing right well at school, too, and do you know," she smiled at me whimsically and lowered her voice, "I've gone in for another kind of self-improvement lately. Whenever I can find time to squeeze it in I'm doing a little reading on subjects that I know my boy and girl are interested in, just so I can keep up with them and with the times. I call it 'my studies,' she chuckled, "I used to teach school, but goodness, how rusty I've grown!"

"Tell me about your studies," I urged. "Well, as my girl gets deeper in history, English and science, I read up a bit on topics I know will be in line with those she's wrestling with, or liking as the case may be. I want her to feel she's studying subjects in which everyone in the world about her—even her mother—is interested. It's surprising how she enjoys talking things over with me."

"And what about your boy?" I asked. "Same way with him. He likes mathematics, and the other day I found an old arithmetic of mine with some quaint problems in it that entertained him as much as a movie. But he is hard to keep up with. No wonder someone has said—

"Snips and snails and puppy dog's tails! That's what little boys are made of!" Of course, I don't have much time for my studies, but I do the best I can. I don't want to be a back number."

At a particularly hilarious burst of mirth from the crowd in the sitting-room, she laughed too and nodded to a girl who happened to catch her eye. This vivid young person immediately ran over to our corner and perched herself on the arm of the couch on which we sat.

"Oh, we do have the best times in your home," she exclaimed. "You are the nicest person to visit. You're such fun. You seem just like one of us girls somehow. Why, when Grace asks us to come up here after school, we always say, 'If your mother is at home we will.'"

As if that settled the matter she blew a phantom kiss from her finger tip and sped away again. My hostess sighed and smiled. "I'm thankful for the young folks," she said, "but it's a big task we older ones have, keeping up with them. I mean to be in step as long as I can." "You won't miss a beat," I answered with conviction.

Capitalizing Your Ninety-eight Cents

Enough fat to make seven bars of soap
Enough iron to make a nail of medium size
Enough sugar to fill a shaker
Enough lime to whitewash a chicken-coop
Enough phosphorus to make twenty-two hundred match tips
Enough magnesium for a dose of magnesia
Enough potassium to explode a toy cannon
Together with a little sulphur.

Scientists have found that the human body is made up of these chemical elements. The market value for all these is about ninety-eight cents.

According to Dr. Henry C. Sherman, a noted food chemist of Columbia University, milk contains calcium, magnesium, potassium, sodium, phosphorus, chlorine, sulphur and iron.

Since the proportions of the various elements named by the chemist show that there is more lime in the body than any of the other chemical constituents, it is particularly important that milk, which is the main source of supply for

lime or calcium, be made available for the body to use.

The way to capitalize our ninety-eight cents or chemical value, so that it will help in the building of strong teeth, bones and tissues, is to eat enough of the various sources of supply so that our individual bodies will be sure to have the full ninety-eight cents' worth. Even the difference of one cent, when it is a matter of our own body chemistry, is enough to keep us from feeling like a million dollars and making good in our life purposes."

The chemist who made the original experiments found this ninety-eight cents' worth of market value in an average man, five feet, ten inches tall and weighing about a hundred and fifty pounds. Boys and girls who are still growing would of course not yet be chemically worth the ninety-eight cents, so they have the power of building up their own market value by drinking milk and eating the green leafy vegetables which are rich in both calcium and phosphorus.

Ladies of the Inter-State Milk Producers' Association and their friends:

A cordial invitation is extended to all ladies and their friends, of the Inter-State Milk Producers' Association to attend a meeting to be held Monday, Nov. 28th, at 10.30 A. M., in the offices of the Association, 1211 Arch Street, Philadelphia.

The program will include talks by Miss Lydia Broecker, head of the Nutrition Department of the Dairy Council, and Miss Clarette Sehon, of the Dramatic Department of the Council. The play this year will be "Listening In", and will be given by members of the Dairy Council Staff.

This play is as entertaining as "The Winter Coat", given last year.

Luncheon will be served by the Nutrition Department of the Dairy Council immediately following the meeting.

A cordial invitation is also extended to the ladies to attend the meetings of the Inter-State Milk Producers' Association to be held at the Benjamin Franklin Hotel, Monday afternoon, Nov. 28th, and Tuesday morning, Nov. 29th, as well as the annual banquet Monday evening. Details of the program are announced elsewhere in this issue of the Review.

"At Two O'clock"

Just when a mother draws a long breath of satisfaction that baby is growing nicely on spinach and carrots, cereal and potatoes and milk, he suddenly celebrates his second birthday and gives her a whole new set of problems to settle. Given a healthy stomach, one-year-old will accept spinach, apple-sauce, carrots, beans or prunes with impartiality. He has only a few teeth and his sense of taste is comfortably undeveloped. The two-year-old has from sixteen to twenty teeth, a working vocabulary and a sense of taste. Fruit gelatin and custards appeal to him while cereals begin to pall.

The remedy, I believe, is variety. We all like change and the two-year-old needs it even more than the grown up because food plays a larger part in his daily program. Vary his cereal; oatmeal one morning, wheatena the next. Or once in a great while omit the cereal altogether and give him a little more toast

with his egg. And speaking of toast, try cutting the bread into fancy shapes before you dry it. Junior, who is a little older, refused all bread until I cut it into little round slices with a biscuit cutter. Bread cut in "fingers" has a charm, too, and if you have a set of cookie cutters your bread troubles are ended!

Spinach and carrots are good old standbys, but even there two-year-olds will appreciate a change. Tender canned asparagus tips make a special treat in winter. Vegetable soup with alphabet noodles in it is great fun if he is beginning to recognize the letters.

Desserts, of course, are still very simple—junket, cup custard, plain cornstarch or best of all, fruit in some form. Perhaps applesauce is the favorite, but baked apples, fruit gelatin, and prune whip all have their charms. In fact all food, properly varied, is charming when one is two years old and well and active.

Dorothy Stone Tells How Ranch Life Trains For Stage Success

An actress who has never been to a night club and who drinks a glass of milk between acts! Such a person is Dorothy Stone who faced a new kind of audience the other day in Philadelphia at a meeting of Women's Clubs.

Miss Stone, who is not only the daughter of players, but boasts of a grandmother who will not forego her morning setting-up exercises, was reared in a family where the homely American virtues were practised.

It was the greatest ambition of Fred Stone, an exponent of clean fun, that his daughter should follow his footsteps to the stage, but that desire was carefully hidden from Dorothy. Coming of old "free-will" stock Mr. Stone determined that his child's inclination to the theatre must be hers and not his.

There was apparently no difficulty in making a choice. Miss Stone made her debut in the theatre when she was only seventeen, having first fulfilled a specific agreement with her parents that under no circumstances would she appear in a production until she had completed the equivalent of a high school course. Two younger sisters will also have to measure up to the same scale in education.

Dorothy Stone and her father believe in out-of-door life to keep fit for a season of eight or nine months performing difficult acrobatic tricks. For this purpose Fred Stone, raised on the plains of Kansas, and expert at horseback riding, broncho busting, and lariat throwing, has turned 2200 acres of woodland and farmland, six miles from New Lyme, Connecticut, into a real ranch. Twenty western cowboys are installed winter and summer in typical western ranch houses with a real cook house in charge of two Chinese cooks. Here the family spend their days in much the same way as they could in Colorado or Wyoming.

An actress must keep fit. Miss Stone achieves this with her strenuous sports, an unstinted amount of sleep, and plenty of the right kinds of foods, particularly fruits, vegetables and milk.

The Stones are never seen in public after a performance. Shortly after the final curtain falls Miss Stone and her father may be found enjoying their relaxation at home over a glass of milk and a sandwich, while they discuss their day's work. These two are very proud of their partnership.

There is no "Open Sesame" to the success before the footlights according to Miss Stone. The same rule of hard work applies there as in any other walk of life. "My parents have made most of my dreams come true," said Miss Stone, daughter of Fred and Allene Crater Stone, who believe the stage and a happy, healthy home life are not incompatible.

"If you could see father with the children, running and jumping and roping, and golfing, and shooting, you'd think he was as young as our youngest, and at heart we know he is," remarked the twenty-one year old actress. "He's the only boy we have, and mother says we must not spoil him. Father is anxious to have us children succeed but he wants us to succeed by our own work."

Looks Bad For the Corn Borer

By A. L. Haecker

The European Corn Borer eradication work has been going forward in military order. The clean-up work is about completed according to the reports, and no doubt has destroyed a great many of the worms before they had a chance to mature as moths and lay eggs.

It is not going to be an easy task to rid this country of the corn borer, for the pest spends most of its life inside of the stalk and husk where it cannot be reached by sprays or poison. As the moth is a night flier, it is continually spreading, and is protected from birds. Like many other pests which have been imported, they spread more rapidly than native insects which have many enemies to keep them down. The fact that America grows about eighty per cent of the world's corn, and much is handled in a careless way by leaving stalks in the field, supplies plenty of material for the worms.

To harvest the crop and destroy all the worms is the next great move in the eradication work, and fortunately this can be done by putting the crop in the silo. Since the worms work down in the stalk as the season advances, the corn should be cut as early as possible, and close to the ground. Then practically all of the worms will be destroyed; for once within the silo, the fermentation and heating process sterilizes the corn and kills practically all germs and insects.

The threat of the corn borer to destroy America's greatest crop may in the long run be a benefit to our agriculture. We have been wasting practically half of this great crop for many years, namely the stalk and the leaves, where in the corn belt ninety per cent is left in the field. We have not appreciated the full value of this great plant and its proper care and culture. The majority of our stock keepers are still without the silo, in spite of the fact that it has been proven for the past thirty years the most economic way of feeding corn.

It may be that when we finally eradicate the corn borer we will be advanced in many other things which make for better farming.

Water is Cheap Feed

Water is the cheapest dairy feed. Milk is about 87 per cent water so cows need large amounts of this feed daily. Drinking cups are practical and large profits can be expected from this kind of an investment where they can be used, say dairy specialists.

Philadelphia Inter-State Dairy Council

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Boyetown Building, Philadelphia

A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value in nutrition.

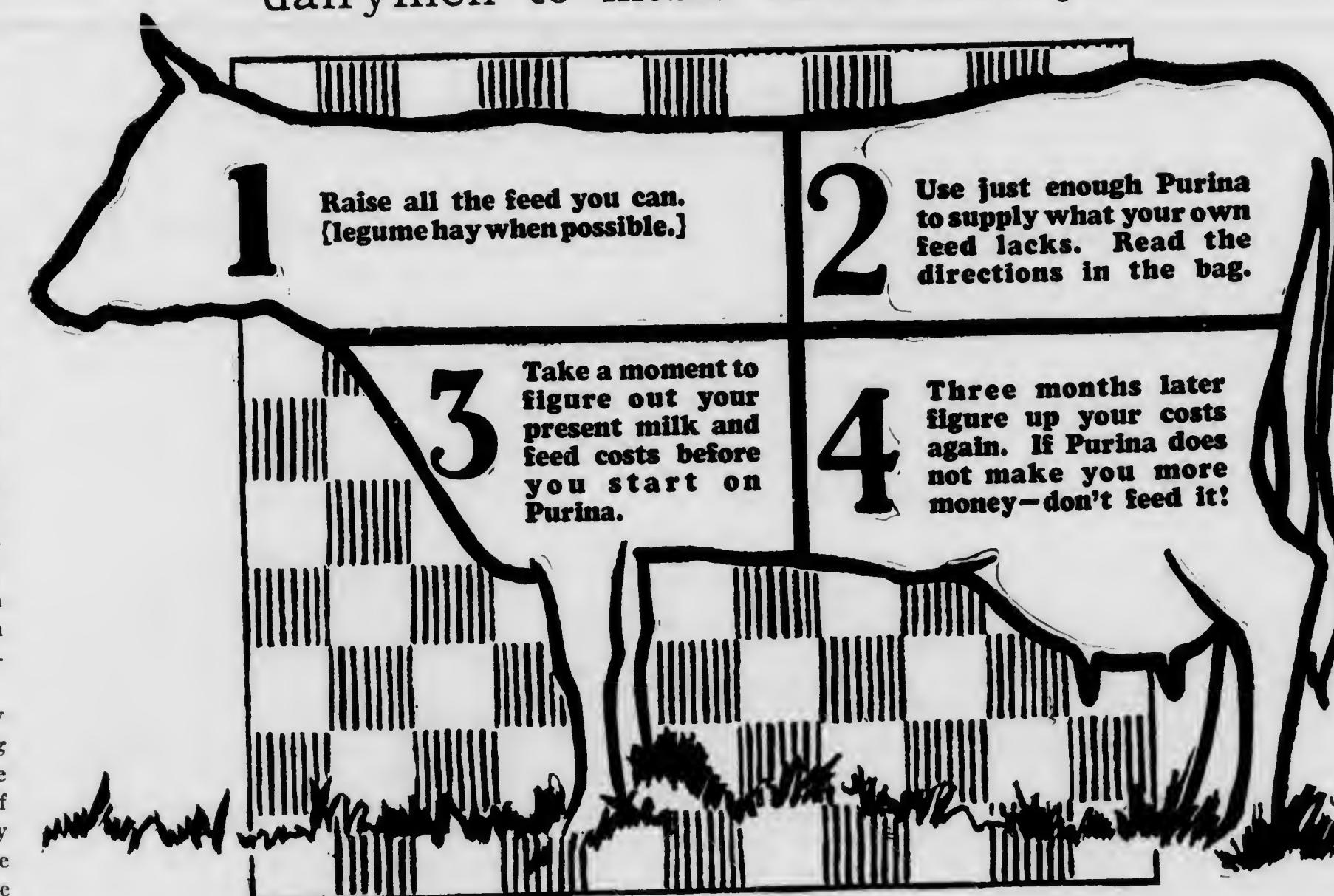
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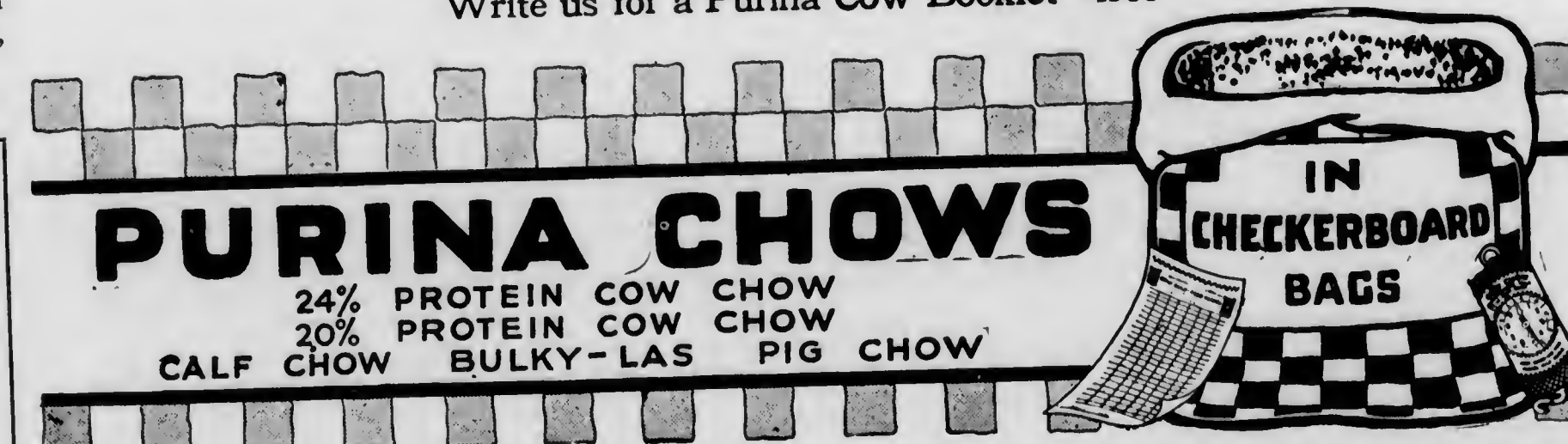


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Philadelphia Inter-State Dairy Council

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Sanitation put an end to the old wooden wash tanks—and the Howlett "Gibraltar" wash tanks are putting an end to the flimsy metal tanks now being sold. The "Gibraltar" was designed by a practical, successful dairyman, Mr. Charles R. Myers, manager of the Brookmead-Guernsey Dairy, Wayne, Pa., and it is the latest and best wash tank built. No more repair bills or replacements once you own a "Gibraltar"—it will last for ages. Prices, drawings and full details upon request.

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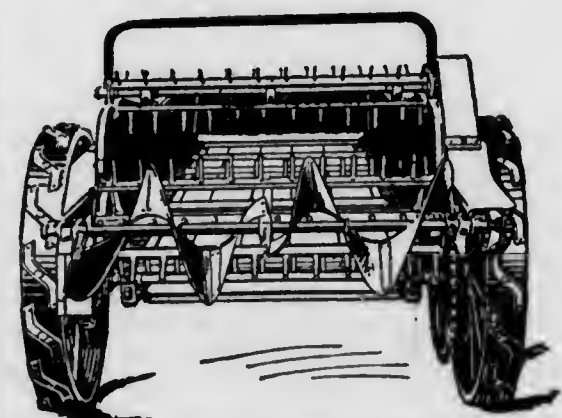
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**Inter-State Milk
Producers' Association**
Incorporated
Boyertown Building, Philadelphia, Pa.

Representing over 21,000 Dairy Farmers in the Philadelphia Milk Shed

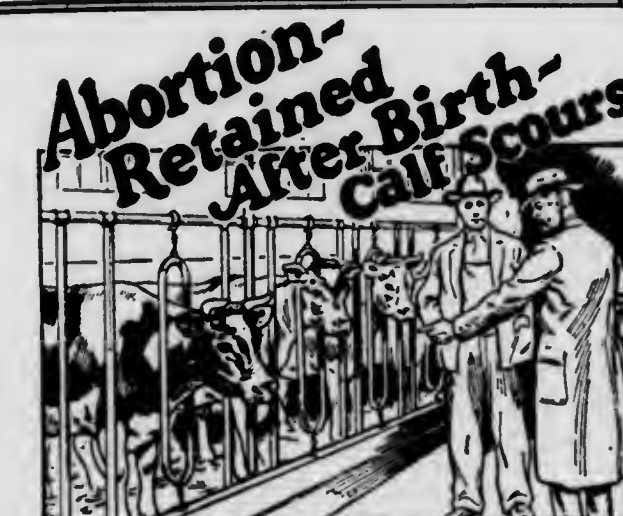
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Farmers who buy complex mineral mixtures to feed to their stock usually pay a lot for salt and lime. And when complicated mixtures are fed, stock may get a lot of substances that are not only unnecessary but positively harmful.



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For 15 years we have been watching the use of B-K on the farm and checking up our observations with laboratory tests. Our book gives you the results of this vast experience without cost. The book covers: Abortion—caused by germs of several kinds. What they are and what can be done in prevention and control is told in our book. Retained Afterbirth—How to reduce adhesions, bring safe, natural removal without manual help, and heal the tissues. Calving Scours—The cause, how to prevent and save your calves.

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B-K is made by our special process, which produces the only stabilized hypochlorite ever approved by the American Medical Association. Its germ destroying power is 10 times greater than that of undiluted carbolic acid, yet B-K contains no poison, or acid, and leaves no odor.

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Penna Ranks As One of Twelve Leading Agricultural States

Pennsylvania ranks as one of the twelve leading agricultural states, according to recent studies based upon 1926 crop and livestock estimates.

The total value of crops raised and animal products sold aggregated \$577,000,000 in Pennsylvania last year, the gross value of crops being \$286,000,000 and of livestock products \$291,000,000. Since a large percentage of the crops was fed to livestock on the farms and the cash return from these crops came from the livestock products, the \$577,000,000 must not be interpreted as representing farm income.

The states which exceed Pennsylvania in value of crops and livestock products sold are: Iowa, Texas, Illinois, Missouri, Kansas, Wisconsin, Ohio, California, New York, Minnesota and Nebraska.

The figures also show that farmers in Pennsylvania produced crops and livestock products of practically the same value in 1926 as were produced by the farmers of all the New England States and New Jersey combined.

Do More Than Strain Milk

Remember that straining removes only the coarse material from milk. It does not reduce the bacteria count or remove the finer particles of dirt.

Why Milk May Be Off

Undesirable flavors and colors in milk come from three sources: the air, the body of the cow, and from changes in the milk caused by bacterial action.

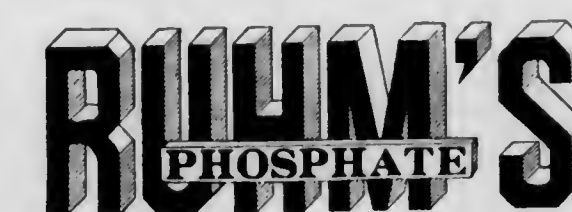
About 5,000 cooperative livestock shipping associations and other local associations shipping livestock are doing business in the United States. In 1926 they handled approximately \$400,000,000 worth of livestock for members.

Same Old Story

Wife—"I found a letter in your coat pocket this morning and it was in a woman's handwriting."

Hubby—"I'm sure I've no idea how it got there."

Wife—"I have. It is the one I gave you to mail a week ago."



BEST STABLE MANURE IMPROVER KNOWN

Bigger Crops. Regular Profits.

100-lb. Trial Bag with directions, \$1.00 f. o. b.

\$4.00 to \$8.00 per animal saved yearly.

Agents wanted.

RUHM PHOSPHATE & CHEMICAL CO.

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High Grade Dairy Cows

in HIGHTSTOWN, N. J.

We handle all kinds of cattle

Holsteins — Guernseys — Jerseys

A Specialty

All cows tuberculin tested and sold subject to a 60 or 90 day retest and fully guaranteed in every respect.

Free delivery any distance.

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Quaker Dairy Rations mean MILK PROFITS

Quaker Dairy Rations insure maximum milk production at minimum cost. Our recommended methods of feeding prescribe this important advice:

**"Feed the Feed that Fits
Your Farm, Your Herd"**

Which of these feeds is the one for you?

Quaker Boss Dairy Ration is the ideal grain ration for cows receiving timothy hay, grass hays, straws, corn stover, or poorer grades of clover.

Quaker Big Q Dairy Ration exactly meets the need of those herds receiving poor alfalfa hay, fair clover hay, or real choice mixed clover and grass hay.

Quaker Dairy Ration has no superior when cows are receiving choice clover hay, good alfalfa hay, or an excellent grade of fine mixed grass-and-clover hay; a good ration for dry stock and for young growing stock.

Quaker Sugared Schumacher Feed, as the exclusive grain ration, has a real place when the herd is receiving liberal quantities of the very best grade of alfalfa hay. For blending it combines beautifully with any Quaker high protein feed. For all stock—dry stock, horses, sheep, swine and steers it is unexcelled.

All Quaker Dairy Feeds contain molasses in dried form and are rich in the minerals cows must have to make milk.

Send for the FREE book—"The Dairy Herd," for detailed information. It tells you just how to meet the feed requirements of your farm, your herd.

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Will cross-cut, rip, plane, groove and tongue plough, mitre, bevel bore, sand rabbit, tenon mortise joint make mouldings, etc.
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They sing constantly, morning, noon and night. Let us sell you one of these canaries on two weeks' trial. Then if you are not satisfied that you own the most wonderful canary you ever heard—you may return him and we will refund your money. You assume no obligation or risk. Last season over 4000 of these birds were sold on trial in the U. S., Canada and Mexico. We guarantee safe arrival.

Send for our Price List and FREE BOOK telling how canaries are trained.

CUDLEY & MULLEN CO.
1281 Arch Street Philadelphia, Pa.
The Largest Pet Shop in the World

Wherever better milking, more and cleaner milk are sought after, the De Laval Milker is chosen



Three high-producing individuals from the notable purebred Jersey herd at Bridgford Farms, owned by C. W. and L. C. Bridgford at Joy, Ill. They say, "We milk from 35 to 45 head of purebred Jerseys and always have a good word for the De Laval Milker. Our De Laval milks fast and clean. The writer has milked 45 gallons from 26 cows in 47 minutes with three units and has at different times weighed the milk from the machine. The individual records and herd averages indicate that the De Laval is a real aid to greater production. Three of our De Laval milked cows have each in the last year set new 305-day records for A. M. cows in Illinois."

The De Laval Milker Helps Good Cows Make Better Records



Mr. Scott H. Hammond, owner of a splendid purebred Ayrshire herd kept at Overlook Ayrshire Farm at Brandon, Vt., writes, "My cows are all milking well, two-year-olds giving between 30 and 35 lbs. daily while the best cow has given close to 75 lbs. in one day. Since using the milker I have not had one complaint from the milk station regarding the bacteria count. My customers are profuse in their praise of 'Clean Ayrshire Milk.' I want to assure you that the De Laval Milker has been far more than a 'hired man.'"

THE best of cows need the right kind of handling and care in order to reach the peak of their production capacity, and as every breeder and dairyman knows correct milking is of the utmost importance. Owners and herdsmen seeking maximum production know that the milking operation must be pleasing to the cow, must be uniform, gentle, and unchanging in speed and manner day after day, if the best possible records are to be made.

These are some of the reasons why so many noted herds are milked with the De Laval Milker, for no other method of milking affords in a comparable way the uniformity, regularity and dependability that is of such vital importance to the cow on test or to the cow who must pay for her place in the dairy herd.

Hundreds of De Laval Milker users attribute a large portion of the credit for their high herd averages and individual records to the De Laval—and they regard its sanitary features of real value in keeping bacteria counts consistently low.

A postcard will bring the nearest De Laval representative, who will gladly go over your milking problem with you without obligation of any sort.

De Laval Milker

The De Laval Separator Company

NEW YORK
165 Broadway

CHICAGO
600 Jackson Blvd.

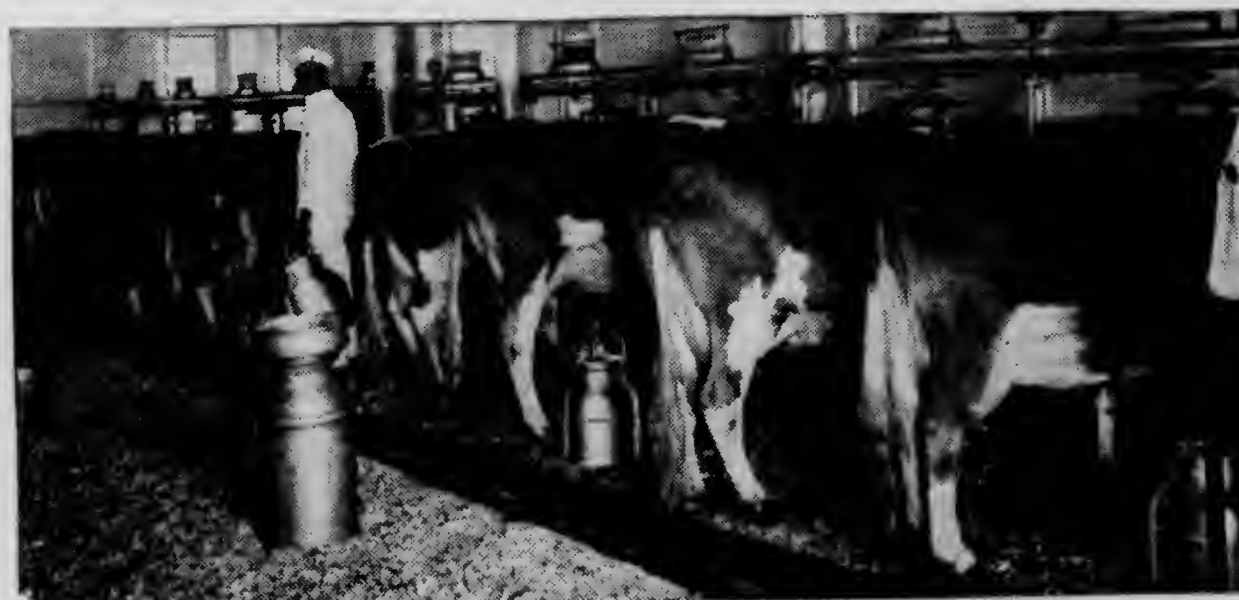
SAN FRANCISCO
61 Beale Street

Mr. Harvey Firestone, the noted rubber manufacturer, has assembled a splendid herd of purebred Holsteins at his beautiful farm at Columbiana, Ohio. A De Laval Milker is used exclusively to achieve and maintain maximum production and to facilitate the production of a low bacteria count milk. Mr. Harry Chadwick, the manager, states that the results obtained with the De Laval far exceed those obtained by hand milking.



Mr. Geo. E. Sutton, superintendent of Audley Farms at Mendham, N. J., home of a well-known purebred Guernsey herd, says:

"We have used the De Laval Milker for the past five years and feel that very much of our success in largely increased production during that time must be attributed to its use. Its absolute cleanliness goes far, both from the sanitary and time-saving viewpoints."



Milk Producers' Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

Volume VIII

West Chester, Pa., and Philadelphia, Pa., December, 1927

Number 8

ELEVENTH ANNUAL MEETING INTER-STATE MILK PRODUCERS' ASSOCIATION, Inc.

PHILADELPHIA, PA.

An unusually large attendance, both from the standpoint of the individual membership as well as official delegates from Local Units throughout the Philadelphia Milk Shed, were present, to participate in the Eleventh Annual Meeting of the membership of the Inter-

by R. W. Balderston; Reports of the Field and Test Department, by F. M. Twining, director of that department followed. (These reports are printed in full in the Milk Producers' Review.)

Robert F. Brinton, treasurer, made a detailed report of the financial condition of the association as embraced in the audit of the associations affairs, as of October 31st, 1927, by McGee, Fleisher and Co., Certified Public Accountants. Copies of this report are on file in the offices of the association and may be inspected by any member of the association.

The following named candidates for directors, whose terms had expired were presented by the Nomination Committee for reelection.

J. H. Bennetch, Lebanon County, Pa.
A. R. Marvel, Talbot County, Md.
Ivo V. Otto, Cumberland County, Pa.
J. A. Poorbaugh, York County, Pa.
C. F. Preston, Chester County, Pa.
Frederick Shangle, Mercer County, N. J.

R. I. Tussey, Blair County, Pa.
F. M. Twining, Bucks County, Pa.
The following names of candidates were nominated from the floor of the meeting.

Thomas Wilcox, Delaware County, Pa.
J. B. Wolfkill, Washington County, Md.

Following the circulation of the ballots the tellers announced the following candidates had been elected to serve the

H. D. ALLEBACH
President
Inter-State Milk Producers' Association

State Milk Producers' Association, Inc., which was held at the Benjamin Franklin Hotel, Philadelphia, Pa., November 28th and 29th, 1927.

The general business session was held on Monday, November 28th, when after reading the usual call for the meeting, President H. D. Allebach introduced Dr. Wilmer Krusen, Director of the Philadelphia Department of Public Health. Dr. Krusen expressed keen appreciation of the work that has been done by the producers of milk to protect the milk supply. The progressive efforts of your association mean well for the welfare of your farmers as well as for the public. "Sanitary Science," said Dr. Krusen, "is an established factor in the production and handling of the milk supply and must be developed along safe and sound methods."

Following the reading of the minutes of the previous annual meeting of the stockholders of the association, the formal appointment of committees were made by the president.

Nomination Committee: Norman C. Maule, Lancaster County, Pa.; N. V. Stauffer, Cumberland County, Pa., and P. M. Roe, Talbot County, Md.

Resolutions Committee: Phillip Price, Chester County, Pa.; S. Martin Elliot, Sussex County, Del.; Alvin Satterthwaite, Monmouth County, N. J.

Tellers of Election: Fred H. Totten, Hunderton County, N. J.; Ely Fretz, Bucks County, Pa.; Wm. L. Troub, Chester County, Pa.

Reports of the secretary of the Inter-State Milk Producers' Association, Inc.,

R. I. Tussey, Blair County, Pa.
F. M. Twining, Bucks County, Pa.

Dairy Council Report

R. W. Balderston, secretary, made a detailed report of the activities of the Philadelphia Inter-State Dairy Council during the past year. (This will be



FREDERICK SHANGLE
Vice President
Inter-State Milk Producers' Association

printed in full in the Milk Producers' Review.)

Resolutions

The following resolutions were presented by the Resolutions Committee and were unanimously adopted. WHEREAS—The Congress of the United States when assembled in the last session enacted an ordinance known as the Lenroot Taber Law, specifying that all milk and cream imported into the United States must be produced under sanitary conditions at least equal to the minimum of those imposed upon dairymen in this country.

AND WHEREAS—Congress provided that the Secretary of Agriculture of the United States should be charged with the task of enforcing these regulations. AND WHEREAS—The Congress of the United States failed to provide funds to execute the provisions of this act. THEREFORE—Be it resolved that this body take suitable means to lay before the Congress of the United States in the next session assembled, the urgency of providing funds for the Secretary of the Department of Agriculture to properly enforce this act.

The following resolution was presented to your committee by the Harborton Local.

WHEREAS—The State Board of Health of New Jersey proposes adopting a new or uniform system of health regulations for the production of milk. BE IT RESOLVED—That the Inter-State Milk Producers' Association in convention assembled go on record as favoring this uniform system of regula-

tions and will do all in its power to bring about same.

Signed, Wm. Lauterdale,
Harborton Local.

Your committee reports adversely upon this resolution as made. They would recommend to the Annual Meeting of the Inter-State Milk Producers' Association the advisability of impressing the various agencies charged with enforcing sanitary regulations, namely: the Dairy Council, the various Boards of Health and buyers of milk, the advisability of co-operating toward the adoption of some code on sanitary regulations acceptable to all.

A Committee of the Board recommended:—"That in the future, until further notice, the Association adopt the following policy regarding financial assistance of the Association in the matter of local expenses.

1st—That the central office undertake to send out all notices of local meetings, the work to be done in central office at no expense to local for labor or postage.

2nd—That local hall rent to the extent of \$5.00 per meeting for not more than four local meetings per year be paid by association to each "local" of 25 accredited members, provided central office is notified in advance. Such meeting will be held and report of meeting to be filed."

Visiting Ladies Entertained

The entertainment of the visiting



R. W. BALDERSTON
Secretary
Inter-State Milk Producers' Association

ladies of the delegates and members of the association was held on Monday, November 28th, at the offices of the association. This program was in charge of a committee composed of Mrs. Robert W. Balderston, chairman; Mrs. H. D. Allebach, Mrs. A. B. Waddington, Mrs. Frederick Shangle, Mrs. C. I.

(Continued on page 7)

Secretary's Report, Inter-State Milk Producers' Association

R. W. BALDERSTON

When the transfer books of the Inter-State Milk Producers' Association were recently closed for this Annual Meeting in accordance with the requirements of the by-laws, there had been issued a total of 20,961.6 shares of stock. These are represented by a total issuance of 24,932 certificates. There are some stockholders who hold more than one stock certificate, and certain of the certificates represent a transfer of stock rather than new shares. During the past year 1207 stock certificates were issued representing 882.3 shares of stock. The best estimate available of number of living stockholders is 22,827.

Before discussing certain aspects of our present membership situation as disclosed by these figures I will refer briefly to the early history of the Association. Most organizations of milk producers were in their early days loosely knit groups with practically no evidence of mutual obligation as between the member and the organization. In many cases where the association had assumed financial obligations, many members found to their monetary loss that this

details of our by-laws. Changes in the corporate "set up" of the organization need not involve in any way the form or tenor of this agreement. Our contract has performed its function admirably throughout the life of the organization, and has many times been used as a basis for a similar contract by other organizations.

The history of our Association, year by year, has been one of unusually even progress with no violent market crises at any time. Had we been compelled to meet such situations, doubtless there would have been proposed to the stockholders some such adjustments in corporate form as have taken place in other sections. Many of our affiliated associations in the National Milk Producers' Federation now have charters granted under one of the recently enacted cooperative laws not in existence at the time we organized. It is a cause for satisfaction that such a difficult and expensive undertaking has not been found necessary in our market. However, because of these facts, there has grown up on the Association's books an

Record of Stock Outstanding and of Membership Inter-State Milk Producers' Association, Inc.

At Close of Transfer Books for Fiscal Year Ending October 31, 1927

Fiscal Year	No. Certificates Issued to Date	No. Shares Outstanding to Date	No. Certificates During Year	No. Shares Issued Year	Approximate Membership to Date
Nov. 30, 1917	4,097	4608.6	4,097	4608.6	4,097
Nov. 30, 1918	6,050	6218.7	1,953	1640.1	6,009
Nov. 30, 1919	10,500	9354.9	4,450	3106.2	10,219
Nov. 30, 1920	13,002	11308.6	2,502	1953.7	12,538
Nov. 30, 1921	15,307	13009.8	2,305	1701.2	14,697
Nov. 30, 1922	16,577	13942.6	1,270	932.8	15,527
Nov. 30, 1923	19,095	15689.2	2,518	1746.6	17,680
Nov. 30, 1924	21,111	17323.5	2,016	1634.3	19,022
Oct. 31, 1925	22,504	18344.9	1,393	1021.4	19,830
Oct. 31, 1926	23,725	19209.3	1,221	864.4	21,820
Oct. 31, 1927	24,932	20991.6	1,207	882.3	22,827

11 Months only.

lack of definiteness had placed complete responsibility on each member for all the financial obligations of the Association.

Consequently during the period 1915-1917 much attention was given to perfecting clear-cut forms of agreement and definite articles of incorporation. In order to overcome this weakness and to define the responsibility of each member toward the Association, and the Association toward the member, the legal advisors of a large number set up for them the contract form of agreement in conjunction with a capital stock corporation.

It was furthermore discovered that the usual corporate form of organization was at that time the only one provided for by legislation which would overcome these evils, clearly define the duties and powers of the officers of the organization in marketing the milk of the members, and carry out the aims and safeguard the rights of the members. Consequently Milk Producers' Associations such as the Inter-State Milk Producers' Association, Inc., became corporate in form but actually cooperative in function and in point of fact.

During the past eleven years our association has proven that this form of organization which has been adopted was in most respects admirably suited for the purposes for which it was intended. The contract between the member and the association has remained, with very few minor changes, as originally approved. This contract can stand alone, practically regardless of the

accumulated inactive membership. In reports of the Secretary in other years attention has been called to this as a problem that would have to be faced sooner or later. Now, after eleven years it is felt by the Directors that the inactive membership problem is of sufficient importance to justify its careful study from every angle. Such a study has already been undertaken. As the study progresses and various factors come to the surface, the stockholders may be called on at some later meeting to act upon proposals of the Board designed to correct the condition.

The central office of your association has one-half completed a comprehensive system of membership records which will make available to the Board of Directors and the members at any time complete information with respect to our membership situation. We will be able to report accurately the number of active and inactive members. We will know where each member delivers milk, each month and how much he delivers. This system also provides a method of determining who are the inactive members and the reasons for their inactivity. When the new records are complete, they will provide information which will aid materially in solving such problems as (1) What is the correct status for an inactive member? (2) How to coordinate local activity with the central organization, (3) most important, to furnish information necessary in the marketing of our members' milk.

The above tabulation gives evidence

(Continued on page 11)

The Member and His Cooperative

J. W. JONES, at Annual Meeting
Inter-State Milk Producers' Association

The organization set up of a farmers cooperative marketing association makes the members such intimate parts of the organization that they may be said to be the boundaries of success or failure of the organization. They select the management, usually by one man one vote, and are thus directly responsible for the kind of management provided by the organizations. Mistakes in selection of management can be quickly corrected if the membership is competent to select good management. Mistakes in management policies may often be traced to the membership demand for at least acquiescence in such policies.

There has been a tendency on the part of some people to class cooperative marketing associations with Big Business, and to the detriment, I think, of proper understanding of cooperative organization. Cooperative organizations marketing a large volume of the product handled, often have a financial total business of several million dollars that makes an improper impression on the mind. This impression is particularly improper if it tends to make one overlook the fundamental differences between cooperative and corporate organization. These differences are fundamental and inherent in the very nature and purpose of the two kinds of organization.

A corporate organization is really an aggregation of capital contributed by investors whose interest is largely in dividends on the capital. The contribution of stockholders is generally made up of savings and a complete loss would not seriously impair their ability to meet current obligations. In many cases the purchase is one of a speculative nature and possibility of loss or gain is understood. But the farmer wants no speculative feature in his cooperative. His contribution is not capital and savings so much the gross proceeds of the enterprise out of which current obligations must be met. The primary purpose of a cooperative marketing association is greater returns from the farm enterprise.

In a corporate organization the shareholder may have no interest or connections with the volume of business done by the organization. After he has contributed his investment in the purchase of the stock he is under no obligations to keep it or patronize the corporation. He is often not in position to patronize the organization. But the cooperative association depends on the members for volume of business and also for quality of product handled. Interests of the cooperative and the member is identical for the members are the association. "They are it, and it is they" might express it truthfully.

Cooperative associations are democratic, in theory at least. Members select directors and directors select management. If members are dissatisfied with management or management policies they can change them. In corporate organization voting is done by shares of stock and it is sometimes possible for a few individuals owning large blocks of stock to control the organization. Where the shareholders are widely scattered individuals holding much less than a majority of shares may exercise a dominant influence without the agreement of the rest. If shareholders don't like the policy of the organization they can sell their shares of ownership with-

out injury to the corporation. But when a cooperative loses membership it loses volume of business.

Some have indicated that they believed a strongly organized cooperative association controlling a large part of the production could exercise arbitrary price fixing powers or monopoly influence. Analogies in market control have been drawn between large cooperative organizations and large industrial corporations. Many of these analogies were unjustified because of the fundamental differences in the type of organization. No cooperative association can control prices long at a time, because the board of directors and management which determine prices in a corporation also determine how much the corporation will produce. This is not the case in a cooperative, however, for the individual members of a cooperative association plan their own production programs. If prices increase, production therefore increases because individual producers see increased opportunity for profits. Some cooperative associations not recognizing this fundamental principle when they held a dominant place in the market have brought disastrously low prices on themselves when they put prices so high as to encourage a large increase in production.

Cooperative marketing associations are more dependent therefore on the intelligent interest of their members than corporations are. The democratic nature of a cooperative association is its strength as well as its greatest weakness. In all the democracies with which I am acquainted there are a large number who take no interest in government of the organization. Thousands of people fail to vote in municipal, state and national elections. Cooperatives suffer from the same neglect or lack of interest. Sometimes those who do not participate in selection of officers try to make up for their neglect by criticizing the officers selected and whatever is done by these. When members take an intelligent interest in their organization they are a source of great strength.

You will notice that I say intelligent interest. Sometimes sincere interest is manifested but not directed by knowledge or intelligence. All organizations are effected with members who manifest considerably more zeal and energy than judgment in the affairs of the organization. This sort of interest is of little benefit to any organization and may be very harmful to a cooperative whose members are equipped with inadequate knowledge.

Members should understand thoroughly the aims and purposes of the organization and how these purposes are to be realized. I fear that farmers too often join a cooperative with the thought that by such force of numbers they will control the market and make somebody do something. The purpose of a cooperative association is to get more money for its members of course, but this purpose must be based on a something more than a wish for better prices. Purpose for better prices must include an understanding of the conditions that make prices low and what changes in those conditions must be made before prices are improved. And so it follows that if members are to understand the purposes of their organization they must understand what conditions the organi-

(Continued on page 11)

ANNUAL ADDRESS

H. D. ALLEBACH, President

INTER-STATE MILK PRODUCERS' ASSOCIATION, Inc.

The eleventh Annual Meeting of the Inter-State Milk Producers' Association marks another milestone in successful cooperative marketing of milk in the Philadelphia Milk Shed.

The price for basic or fluid milk to our members has remained unchanged at \$3.65 per one hundred pounds for 4% milk delivered f. o. b. Philadelphia basis. The increase of 35c per one hundred pounds announced more than a year ago and which became effective September 16, 1926, therefore remains in force. This price of \$3.65 compares very favorably with that paid by any major milk market along the Atlantic seaboard and is considerably higher than that which obtains in many of the inland markets.

The basic price at receiving stations in the 51-60 mile zone, is as heretofore, subject to a deduction of 57.55 cents per one hundred pounds from the f. o. b. Philadelphia price to cover freight and station operating charges. This price has also remained unchanged throughout the year and has been \$3.11 per one hundred pounds of milk testing 4% butterfat at all plants in this freight zone.

The past fiscal year has been the first in which surplus prices have been paid throughout the twelve months. In accordance with the modification of the selling plan announced in September, 1926, all milk produced by individual farmers in excess of their established basic quantities has been sold at surplus prices, with the usual provision of a second surplus classification during the months from January to June inclusive. Notwithstanding this fact the amount of milk sold in the surplus classifications this year has been but one and one-quarter per cent higher than in the fiscal year ending October 31, 1926. Surplus prices have been somewhat more favorable this year than in the past year. The weighted price for all surplus milk sold by our members on a 4% butterfat f. o. b. Philadelphia basis has been \$2.73 per one hundred pounds. This represents an increase of \$0.16 per one hundred pounds over that which prevailed last year when the weighted average price for the twelve months, ending October 1, 1926 was \$2.57 per one hundred pounds on the same basis. This increase in 1927 is roughly one of six and one-quarter per cent and is a direct result of the more favorable condition of the butter market during the past year.

At the beginning of this past fiscal year the amount of butter in storage was especially low and the conditions surrounding production in the butter regions were by no means favorable. Due to these higher butter prices, during the late winter and early spring surplus milk prices have been on a decidedly higher level than those which prevailed during the previous year. The whole situation was decidedly changed, however, with the coming of the pasture season in May. From a supply of butter at that time, very much less than that recorded in any recent year, the stocks of storage butter have mounted to such an extent that today the butter in storage is very much in excess of any recent year except 1924. Butter prices today are not quite equal to those of last November so that our surplus prices at this time are just about on a par with those which prevailed a year ago; but

the prices of the early months of this fiscal year were sufficiently higher as to make the weighted surplus price throughout the year about 16c per hundred pounds in excess of that of last year.

The weighted average price for all milk on a 4% butterfat f. o. b. Philadelphia basis is \$3.583 per one hundred pounds. This applies to milk of standard or so-called "B" grade. This is \$2.79 higher than the weighted price of \$3.804 which prevailed during the fiscal year of 1926. This increase is approximately one of twelve per cent and is a result of two facts; first, the higher prices prevailing in the butter market and second, the higher basic price of 1927. These higher prices have substantially repaid our producers for the increased cost and care necessary to the production of high quality milk on a year-round basis. The fact that your association has been able to return approximately 28c per one hundred pounds more to producers than was the case in 1926 is largely because the producers in the Philadelphia territory have willingly cooperated in a program to adapt production to demand.

The following table presents in detail the prices in effect month by month, during 1927 on the various classes of milk.

Milk Prices—Fiscal Year 1927—Per 100 Pounds
4% Butterfat F. O. B. Philadelphia, Pa.,
Inter-State Milk Producers' Association, Inc.
Fiscal Year Ending October 31, 1927

MONTH	Basic Price	First Surplus Price	Second Surplus Price	Ave. Pr. ce All Milk (a)
November	\$3.69	\$2.06	....	\$3.650
December	3.69	3.17	....	3.659
January	3.69	2.95	\$2.55	3.652
February	3.69	3.01	2.60	3.660
March	3.69	2.93	2.54	3.628
April	3.69	3.00	2.59	3.626
May	3.69	2.65	2.30	3.503
June	3.69	2.59	2.25	3.482
July	3.69	2.56	....	3.538
August	3.69	2.54	....	3.523
September	3.69	2.74	....	3.572
October	3.69	2.88	....	3.595
Weighted Averages for the year (b) ...	3.690	2.743	2.267	3.583

(a) Weighted by Quantities sold at Basic, I Surplus and II Surplus Prices.

(b) Weighted by Quantities sold each month.

The weighted price given above of \$3.58 is not the entire story. Somewhat more than 30% of all the milk sold in Philadelphia during the past year has been carried in addition to the "B" milk price, "A" and "AAA" bonuses, in recognition of especially good care and farm conditions. While exact data is not available at this time these bonuses would add not less than 12c per one hundred pounds to the weighted price of all milk given above; thus bringing the weighted average figure to about \$3.70 per one hundred pounds. In order to obtain the weighted average price on a gross f. o. b. Philadelphia basis, such as is generally quoted in other markets, to this price of \$2.70 should be added the 2c per one hundred pounds now paid by members to the association as commission, and the 1c per one hundred pounds paid to the educational fund of the Philadelphia Inter-State Dairy Council. This gross price is \$3.73 per one hundred pounds for milk testing 4% butterfat.

Production

Your association has handled during the past fiscal year 713,678,801 pounds of milk, which at the weighted average "B" price had a value of \$25,578,248.28—a

little more than twenty-five and one half million dollars. This sum does not include any premiums paid for special grades. The increase in weighted price in 1927 over 1926 of \$0.279 has returned to our producers \$1,991,163.86 more than would have been returned, had the same volume of milk been sold at the average price of 1926. Roughly this increase amounts to two million dollars and we believe that our members will feel that this sum is a very much worth while reward for the additional effort and care involved in producing high quality milk in substantially even amounts each month of the year.

During the year 1927, our highest production occurred in the month of June when the average daily deliveries reached a point 24% higher than the average for the year. This is a substantially wider variation than occurred any time last year when the peak was also reached in June but which was only 15% above the yearly average.

There is no question but that a considerable amount of the flush production during the summer months this year was a direct result of the unusually favorable pasture conditions. To the degree that this variation came from this cause, it was not within the control of our producers to regulate it. To the degree, however, that it was caused by

These new demands have, each year, made necessary some shifting of supplies.

The proportion of milk in the milk shed to manufacturers of milk products is decreasing. However, a number of such plants are still active at various points. These manufacturers either buy on the Inter-State Milk Producers' Association's plan or pay for the milk at a flat price, which, in a majority of cases, is closely in line with our weighted average price.

Influence of World Market

The Philadelphia territory produces relatively little butter, but our market situation is always influenced directly by the world's market for butter. The price of surplus milk in this market is determined by the price of butter in New York City. Milk surpluses can only be marketed successfully either as cream or butter at prices that are in line with the world's butter prices. The average price of butter in New York has been about equal to that of one year ago, although the amounts of butter in cold storage are now higher than at any time for five years. It is a source of satisfaction to the dairy industry that the American public is consuming an increasing supply of butter and dairy products.

Philadelphia Selling Plan

From time to time, since its adoption in 1919, modifications of the Philadelphia Selling Plan have been made at such times as it has been necessary to meet changing market conditions. Such a modification was made in the fall of 1926. During the early part of September, the announcement was made that the basic price would be increased 35c per one hundred pounds, and that each individual producer would be paid during the remainder of the year in accordance with his established basic average for 1925. This arrangement became effective on September 16th, 1926, and, during October, November and December, surplus prices were paid for the first time during the fall months of the year. This modification was adopted because it was felt that the increase in price could not be maintained for any long period, unless some method was provided by which individual producers would be prevented from greatly increasing their basic production due to this higher price. The primary idea back of the plan was to assure a production of basic milk adequate to meet fluid demands in the city and to place into the surplus classifications such increases in production as occurred, thus automatically removing the tension caused by large surpluses. It was thought that this plan would protect the market for basic milk, and this expectation has been fully realized.

One of the unexpected results of the plan, however, was that many producers, feeling it unnecessary to produce winter milk, when they were assured of fluid prices during the surplus season of May and June, provided they did not exceed their established averages, permitted their production to decline during November, December and January of the past year. This practice, together with the unusually favorable weather conditions of the past summer, has had

(Continued on page 10)

Demand for Milk

There has been a steadily increasing demand for milk throughout the territory. There have been satisfactory gains in consumption in our markets. On the other hand, unusual weather conditions during the summer have been responsible for wide spread disappointments in ice cream sales.

The local markets in the smaller cities and towns of the territory are needing ever increasing quantities of fluid milk.

INTER-STATE MILK PRODUCERS REVIEW

Official Organ of the
Inter-State Milk Producers' Association, Inc.

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The eleventh annual meeting of the Inter-State Milk Producers' Association, Inc., recently held in Philadelphia, evidenced the fact that the interest of the dairy farmer in the Philadelphia Milk Shed, is being served and that the program has the approval of the membership at large.

An outstanding feature of the two day session was the fact that the cooperator is disposed to help himself in bettering his condition and to produce for the consumer demand a character and grade of milk that will insure a greater consumption than even at the present time.

The personal attendance at this meeting was larger than ever before while the representation by proxy was practically double that of previous years.

The business of the annual meeting was carried out with dispatch and in an orderly manner and still every one had the opportunity to express his views.

The character of the reports presented by President Allebach and by the representatives of the other departmental branches was clear and definite and represented the wide scope of the association's affairs. These various reports will be reprinted in the columns of the Milk Producers' Review.

The delegates and the membership discussed many problems. It was primarily a meeting of the membership, considering plans and programs with which its directors and officers will be charged with carrying on.

Throughout the various sessions there was a spirit of cooperation in evidence, which with proper care and development, should result in equally satisfactory conditions in the future as in the past.

Announcement has been made by the cooperating buyers of milk in the Philadelphia Milk Shed, that, after June 1st, 1928, they will accept no milk from producers who do not hold a Permanent Permit, as required under the Sanitary Regulations, under the direction of the Quality Control Department of the Philadelphia Inter-State Dairy Council.

The issuance of Permanent Permits has, in many cases, been held up by the failure of producers to perform some needed improvements.

Recently, it was decided that definite action must be taken, so that all the provisions of the Sanitary Regulations,

involving the production and care of the milk supply should be enforced. Many of these infractions of the Sanitary Regulations have been minor ones and can be corrected in a very short time. They should be done at once.

As it will be necessary to inspect every producer, not holding a permanent permit before June 1st, 1928, it is suggested that you fully meet the regulations at the earliest possible date, so that the necessary inspections can be made.

If you do not hold a Permanent Permit at the time stated, there is a possibility that your marketing opportunities will be endangered.

NOTICE

"On and after June first, 1928, no milk will be received at this plant except from producers holding a Permanent Permit issued by the Quality Control Department of the Philadelphia Inter-State Dairy Council."

Note — The above is a copy of a notice that has been or will be posted at Receiving Stations of such dealers as are cooperating with the Philadelphia Inter-State Dairy Council in their campaign for a sanitary milk supply.

Farm Price Index Shows Slight Decline

The index of the general level of farm prices declined 1 point from October 15 to November 15, and is now 138 per cent of the 1909-14 pre-war level, according to the November price report of the Bureau of Agricultural Economics, United States Department of Agriculture.

The index of 138 compares with 139 in November a year ago, due chiefly to higher prices of cotton and cottonseed, fruits and vegetables. The bureau's index of purchasing power of farm products is placed at 92 for October, which is an advance of 12 points over November a year ago.

Declines in prices of cotton, corn, wheat, flaxseed, hay, potatoes, hogs, veal calves, horses and chickens during the past month are reported to have overbalanced increases in oats, rye, apples, cottonseed, beef cattle, lambs, sheep, eggs, butter, butterfat and wool, and account for the decrease of 1 point in the farm price index.

The index of grain prices declined 8 points during the month, due to lower prices of all grains except oats, barley, and rye. A drop of 4 points in the index of meat animals was caused by the sharp decline in hog prices and lower prices for veal calves. An advance in the dairy and poultry index was largely seasonal. While an advance in the fruits and vegetables index was primarily caused by a further advance in apple prices. The farm price of beef cattle has followed an upward trend the last six months.

MARKET CONDITIONS

H. D. ALLEBACH

You will no doubt be interested in the gross volume of business done by the Inter-State Milk Producers' Association during the current year of 1927, as well as the average weighted price paid by our buyers for market or B grade milk, and the amount paid by them in the form of bonuses for special grades, such as "A" and "AA" milk.

From November 1, 1926, until October 31st, 1927 (the association fiscal year) the gross amount of milk handled by our cooperative buyers, that is milk sold under the Philadelphia Selling Plan, was 713,678,810 pounds. This amount of milk was sold, not only in the Philadelphia district, but throughout the entire milk shed.

At the weighted average price on a "B" milk basis paid to farmers for all this milk, this has returned our members approximately \$25,573,248.00. This is equivalent to \$3.58 per hundred pounds at the f. o. b. Philadelphia price, based on 4% butterfat content.

Notwithstanding the fact that, for the first time that we have carried the basic and surplus clause of our selling plan for the full period of twelve months, we only sold one and one-fourth per cent additional surplus milk to our buyers than we did during the corresponding months in the previous year.

Under this new arrangement, we have increased the actual money return to our farmers, by 27.9 cents per hundred pounds over that of 1926. In other words, our producers have received a total of \$1,991,163.00 more than they received for the same amount of milk in the fiscal year of 1926.

The amount of "A" and "AA" milk sold in our markets during the fiscal year of 1927, averaged about 30 per cent of the total quantity of milk produced by our farmers.

The premium paid for these higher grades of milk is not included in the figures given above, which represent only the amount paid for "B" milk.

Based on the estimate of 30 per cent of "A" and "AA" in the market, on the total amount of milk sold, there has been paid an average premium of 12 cents per hundred pounds, a money value of approximately \$856,414.00. This is over and above the increase just noted. The average price of all milk sold including "A" and "AA" milk has been \$3.70 per hundred pounds for 4% milk f. o. b. Philadelphia. This is, we believe, the highest weighted average price paid for milk during any period since the World War, or probably even prior to that time.

The premium paid for these higher grades of milk is not included in the figures given above, which represent only the amount paid for "B" milk. Based on the estimate of 30 per cent of "A" and "AA" in the market, on the total amount of milk sold, there has been paid an average premium of 12 cents per hundred pounds, a money value of approximately \$856,414.00. This is over and above the increase just noted. The average price of all milk sold including "A" and "AA" milk has been \$3.70 per hundred pounds for 4% milk f. o. b. Philadelphia. This is, we believe, the highest weighted average price paid for milk during any period since the World War, or probably even prior to that time.

Comparison of Work Done by Quality Control Department, Philadelphia Inter-State Dairy Council 1924, 1925, 1926, 1927

Year	Sediment Tests	Methylin Blue Tests	Inspections	Meetings	Attendance	Reels Movies	Miles Traveled	Days Fair and Ex.
1924	16,283	12,021	163	14,321	93	107,622	84	
1925	12,079	24,932	89	12,417	62	183,450	230	
1926	23,475	24,997	101	16,744	132	194,371	195	
1927	32,047	153	23,079	93	18,967	49	199,119	158

Quarantine on Nursery Stock Continues All Year

While the quarantine on the movement of farm products because of the spread of the Japanese beetle was removed on October 1, and on cut flowers October 15, the restrictions on the movement of all nursery, ornamental and greenhouse stock, sand, soil, earth, peat, compost

We believe our selling plan is a sound one, but we must caution the farmers producing milk, not to increase their production to an amount that will upset the balance of a regular supply. A steady production, month by month, will result in a steady supply. Over production means increased surplus and a smaller average return for the amount of milk sold.

The Philadelphia Selling Plan governing the basic and surplus production for 1928 has been fully described in the Milk Producers' Review during the past few months, so that I will not dwell further on that topic at this time.

November Milk Prices

Grade B market milk, three per cent butterfat content (basic quantity average), delivered f. o. b. Philadelphia, during November is quoted at \$3.29 per hundred pounds.

The price of basic milk (basic quantity average) three per cent butterfat content, delivered at Receiving Stations in the 51-60 mile zone, during November, is quoted at \$2.71 per hundred pounds. The usual butterfat differentials and freight rate variation applying at other mileage points in the territory, are shown by quotations on page 5, in this issue of the Milk Producers' Review.

The price of Class I surplus milk, for November, three per cent butterfat content, at all Receiving Stations, is \$1.94 per hundred pounds. For f. o. b. Philadelphia delivery the price for Class I surplus milk is quoted at \$2.51 per hundred pounds or 5.4 cents per quart.

November Butter Market

Notwithstanding the unusually large amount of butter in storage, there has been a definite upward trend in prices during November. While the daily fluctuations have been fractional, the gross advance in the price of 92 score butter, New York City for November was 3½ cents.

The market opened at 48 cents a pound for 92 score butter and slowly moved upward, closing at the end of the month at 51½ cents.

The statistical position of the butter market has been more or less unsettled, without a definitely indicated trend. Statistics for the month are not yet available, but it is believed that they will, when issued, shed some light on the situation.

The average price of 92 score, solid packed butter, New York City, on which the November surplus price was computed, was .4933 cents, as compared to .4853 cents for the month of October.

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN

The basic price quoted below for November, 1927, is to be paid by cooperating dealers on the average basic quantity established for each producer. For all milk bought in excess of the basic amount, the surplus quoted below for the month of November is to be paid. Beginning with January, 1927, the basic quantity will be established by using the higher average basic quantity established in October, November and December of either 1925 or 1926.

These quotations are based on 3% butterfat milk and a differential of 4 cents for each tenth point and 2 cents for each half tenth point up or down and are for all railroad points. (Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES
This price list is issued with the understanding it is not to be used by the producers and that all buyers using it as a basis of payment to producers, shall in addition thereto make the following contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk purchased from any producer at price listed hereon.
(2) To the Inter-State Milk Producers' Association 2c per 100 pounds (46½ quarts) of all milk bought from members of said Association.
(3) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk bought from other producers at price listed hereon.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets, and for an educational campaign advertising the food value of dairy products.

BASIC PRICE

November
F. O. B. Philadelphia
GRADE B MARKET MILK

Test per cent. 100 lbs. Price per qt.

3.05 \$3.29 7.1

3.1 3.31 7.1

3.15 3.33 7.15

3.2 3.35 7.2

3.25 3.37 7.25

3.3 3.39 7.3

3.35 3.41 7.35

3.4 3.43 7.4

3.45 3.45 7.4

3.5 3.47 7.45

3.55 3.49 7.5

3.6 3.51 7.55

3.65 3.53 7.6

3.7 3.55 7.65

3.75 3.57 7.7

3.8 3.61 7.75

3.85 3.63 7.8

3.9 3.65 7.85

3.95 3.67 7.9

4.0 3.69 7.95

4.05 3.71 8.0

4.1 3.73 8.05

4.15 3.75 8.1

4.2 3.77 8.15

4.25 3.79 8.2

4.3 3.81 8.25

4.35 3.83 8.3

4.4 3.85 8.35

4.45 3.87 8.4

4.5 3.89 8.45

4.55 3.91 8.5

4.6 3.93 8.55

4.65 3.95 8.6

4.7 3.97 8.65

4.75 3.99 8.7

4.8 4.01 8.75

4.85 4.03 8.8

4.9 4.05 8.8

4.95 4.07 8.8

5.0 4.09 8.8

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

NOVEMBER SURPLUS PRICES

F. O. B. Philadelphia
Class I

Test per cent. 100 lbs. Price per qt.

3.05 \$2.51 5.4

3.1 2.53 5.45

3.15 2.55 5.45

3.2 2.57 5.5

3.25 2.59 5.55

3.3 2.61 5.6

3.35 2.63 5.65

3.4 2.65 5.7

3.45 2.67 5.75

3.5 2.69 5.8

3.55 2.71 5.85

3.6 2.73 5.9

3.65 2.75 5.95

3.7 2.77 6.0

3.75 2.79 6.05

3.8 2.81 6.1

3.85 2.83 6.15

3.9 2.85 6.2

3.95 2.87 6.25

4.0 2.89 6.3

4.05 2.91 6.35

4.1 2.93 6.4

4.15 2.95 6.45

4.2 2.97 6.5

4.25 2.99 6.55

4.3 3.01 6.6

4.35 3.03 6.65

4.4 3.05 6.7

4.45 3.07 6.75

4.5 3.09 6.8

4.55 3.11 6.85

4.6 3.13 6.9

4.65 3.15 6.95

4.7 3.17 7.0

4.75 3.19 7.05

4.8 3.21 7.1

4.85 3.23 7.15

4.9 3.25 7.2

4.95 3.27 7.25

5.0 3.29 7.3

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

NOVEMBER SURPLUS PRICES
At All Receiving Stations
Class I

Test per cent. 100 lbs. Price per qt.

3.05 \$1.94 3.2

3.1 1.96 3.2

3.15 1.98 3.2

3.2 1.99 3.2

3.25 2.00 3.2

3.3 2.01 3.2

3.35 2.02 3.2

3.4 2.03 3.2

3.45 2.04 3.2

3.5 2.05 3.2

3.55 2.06 3.2

3.6 2.07 3.2

3.65 2.08 3.2

3.7 2.09 3.2

3.75 2.10 3.2

3.8 2.11 3.2

3.85 2.12 3.2

3.9 2.13 3.2

3.95 2.14 3.2

4.0 2.15 3.2

4.05 2.16 3.2

4.1 2.17 3.2

4.15 2.18 3.2

4.2 2.19 3.2

4.25 2.20 3.2

4.3 2.21 3.2

4.35 2.22 3.2

4.4 2.23 3.2

4.45 2.24 3.2

4.5 2.25 3.2

4.55 2.26 3.2

4.6 2.27 3.2

4.65 2.28 3.2

4.7 2.29 3.2

4.75 2.30 3.2

4.8 2.31 3.2

4.85 2.32 3.2

4.9 2.33 3.2

4.95 2.34 3.2

ANNUAL REPORT PHILADELPHIA INTER-STATE DAIRY COUNCIL

R. W. BALDERSTON, Secretary

The Philadelphia Inter-State Dairy Council during 1927 has continued its work toward increasing the consumption of milk in the Philadelphia Milk Shed, and in cooperating with the milk producers and distributors toward improving the high quality of the milk supply. The Dairy Council has operated, as in the past, through four departments; the Nutrition, Quality Control, Health Dramatic, and Publicity.

Two outstanding achievements mark the progress in placing the Dairy Council message before the public.

(1) An unprecedented demand for its health material. Staff schedules have had to be arranged twelve months in advance. When announcement was made in June that fall reservations for programs could be secured at that time, fifty per cent of the grade schools in Philadelphia replied with requests for dates, many of which were for the spring of 1928. It has been necessary to schedule the more recent ones in order of receipt.

(2) The growing confidence in the Dairy Council's program of disseminating information pertaining to the food value of dairy products has made possible the utilization of a unique method of group instruction in the use of this organization's health material. The close cooperation with schools and welfare leaders and teachers facilitates the direct reaching of a larger number of individuals than would be otherwise possible. Examples of this new phase of work was shown in a conference of Home Economics Extension workers of Pennsylvania, Maryland, New Jersey and Delaware, and in a meeting of the nurses conducting the Nutrition Classes of the Philadelphia Public Schools held at the Dairy Council headquarters.

Quality Control Department

The work of the Quality Control Department might be classified under the following headings: (1) **Routine Work** of dairy barn inspections, milk plant inspections, and sediment testing. (2) **Educational Work**, including meetings of milk producers for the purpose of improving the quality of milk or reducing the cost of production through a better understanding of breeding for production, proper feeding and economic factors of dairy farm management. (3) **Sales Promotion** to the consumer through explanations of the safeguards surrounding the milk supply in the Philadelphia territory. (4) **Special Activities**, including Milk Shows, Dairy Schools, exhibits, etc. (5) **Personal Work**, including personal services rendered to individual dairymen or individual dealers in various phases of milk improvement problems.

The routine of dairy barn inspections, milk plant inspections, and sediment testing compares favorably with the amount and quality of work accomplished in previous years.

The educational field of the Quality Control Department has been of enhanced value during the past year. Ninety-three meetings were held with producers. Meetings have been held with mens luncheon clubs, Chambers of Commerce and other interested organizations which have emphasized the work which is being done to improve the milk supply in this territory. Through such meetings a greater confidence in the product offered for sale has been instilled in the mind of the consumer.

A new educational play, "Judge for

yourself", stressing the importance of proper equipment on the farm and the necessity of producing a high quality of milk, was prepared and presented at fifty-two meetings throughout the territory by fieldmen of the Quality Control Department.

Three Dairy Schools have been organized and conducted by this department during the fiscal year. One was a three-day school and the others were two-day schools.

Assistance has been rendered to county agents in various counties in forming Cow Testing Associations and in cooperation with the field force of the Inter-State Milk Producers' Association.

Numerous exhibits have been made at various points throughout the Philadelphia Milk Shed. Milk Shows have been actively promoted, and were conducted at the Bucks, Montgomery, Blair and Chester County Farm Products Shows and at the State Farm Products Show at Harrisburg. At least one-half of the milk exhibited at some of these shows was secured through the direct efforts of the fieldmen of the Quality Control Department.

One member of the Department was assigned to the New Jersey Department of Public Instruction for a month for the important work of teaching milk judging in the vocational schools through that state.

Personal service has been rendered to numerous dairymen throughout the district in remodeling barns, preparing plans for milk house construction, problems of barn ventilation, assistance in selecting dairy animals, in purchasing dairy cattle to replace those lost through the tuberculin test, appraisal of animals reacting to the tuberculin test, assistance in rope milk troubles on farms, instruction and demonstration in preparing animals for exhibition purposes, making up proper group selections for fairs, dairy shows, etc., as well as services rendered milk dealers in locating causes of complaints on the part of the consumers relative to their product, etc.

Statistics for the Year

Inspections	23,079
Sediment tests	32,047
Meetings held	93
Reels—movies	49
Attendance	18,967
Miles travelled	199,119
Man days fairs exhibits	158
Temporary permits to date	24,149
Permanent permits	10,253

Nutrition and Dramatic Departments

More than eight hundred and sixty-nine thousand people have been reached by the Nutrition and Health Dramatic Departments during 1927. This is ninety-four thousand more than for the same period the previous year.

Among the forms of contacts of the Nutrition Department have been, interviews, stories, lectures, meetings, exhibits, supper clubs and food demonstrations.

There has been an increase in the scope for adult education. The report of one member of the Nutrition Department alone comprised work in forty-five adult clubs including the following: Parent-Teachers Associations, Mother's Clubs, Professional Women's Clubs, Kiwanis, Civilians, Rotarians, Nurses Classes of Philadelphia General Hospital, Dietitians Club, State Granges, Odd Fellows, Temple Dental School, and the Young Women's Christian Association. Both departments have developed

much new material. A number of plays for adults and children have been so arranged that they may be given without special supervision.

"Old King Cole's Birthday", a Dairy Council dramatic skit received its initial presentation in May by nine hundred boys and girls of the Physical Education Departments of the Philadelphia Public Schools. Six hundred children of the Philadelphia Association of Day Nurseries participated in "The Happy Interlude", a dramatic skit of a similar nature.

A series of four illustrated talks are being offered to women's clubs on the subjects of; the health contribution of the dairy cow to the human race; measures for underweights and overweights; the effect of diet on complexion, disposition and personality; and features of dietary habits of people of other lands.

New health stories have been prepared; in several instances in direct cooperation with the health and nature study departments of schools to have a definite place in the teaching curriculum. "What the Bird's Told" is illustrated with enlarged and colored bird photographs with accompanying bird-call victrola records. "Dirk and Mina of Holland", an illustrated story of the health habits of Dutch children, is being used by the story tellers in costume.

Local cooperation with 4-H rural boys' and girls' clubs begun this year, promises to open into a large field. The Dairy Council was represented at a number of such state and county encampments during the summer in Delaware and Maryland.

The 4-H Clubs in addition to the health projects on their program, include boys' milk-judging contests with food demonstrating and butter making for the girls.

Cooperation with the Nutrition Classes of the public schools has continued, while a large number of parochial schools throughout the territory are now requesting regular Dairy Council programs.

"The Masque of Beauty Through the Ages", the largest dramatic enterprise yet undertaken by the Dairy Council, which was originally presented by the Harding Junior High School, Philadelphia, was used as a project by all of the Altoona, Pennsylvania public schools. It was also given by the Thomas School in Philadelphia.

Statistics for the Year

Interviews	2,735
Stories	3,653
Lectures	361
Movies	65
Meetings	30
Exhibits	12
Supper Clubs	27
Food Demonstrations	138
	7,021

Attendance

Adults	44,589
Children	413,607

Total	458,196
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Health Dramatics

Plays	469
Rehearsals	661
Talks	756
Contacts	148
Castings	82
	2,116

Attendance

Adults	11,740
Children	399,527

Total	411,267
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Publicity Department

A new film, "What Makes It Go", has been screened for schools and theatres showing the value of milk in the diet.

The "Health Talks" prepared by the Nutrition Department which were carried weekly last year by twelve newspapers are now receiving fairly wide distribution through our territory by twenty-five daily or weekly papers.

A number of milk-drinking feature stories, prepared after interviews with nationally known persons, have been released to 175 newspapers.

A series of six health cartoons have been prepared for junior and senior high school publications. These will appear during the present school year in approximately ninety-six issues of these publications. Another set of cartoons for trade magazines and papers has been developed and is now ready for distribution.

Statistics for the Year

Movies in use (non-theatrical)	16
Times Shown	562
x—Attendance	328,909
Movies in use (theatrical)	8
Times Shown	866
xx—Attendance	2,000,000
Pieces Literature distributed	978,805
Mechanical devices (days shown)	1,507

Note—

x—Report of Dairy Council representatives.

xx—Report of McCurdy Films Corporation.

Enlarged Program

The Philadelphia Inter-State Dairy Council is in a better position now than ever before to further its work, which has increased both in volume and in scope during 1926-27. Closer co-operation has become possible with the various health agencies, schools and with the industry itself.

While the program for 1928 will not be approved until the Board of Directors' meets early in December, the following projects and changes in policy have already been suggested or are under way.

1. The Council is cooperating closely with the Board of Education of Philadelphia in the matter of assisting in the distribution of milk to school children. The Council has set aside a representative to have direct care of this matter.

2. As a step toward closer cooperation with our contributors, a series of meetings is now being held with the milk drivers of the larger contributors of Philadelphia and other cities. At these meetings a varied program, educational and entertaining in character, is presented. An educational playlette, "I'll Tell the World" is a feature of these meetings.

3. The incorporation of the Dairy Council under the laws of Pennsylvania as a first class corporation, not for profit, is now under way and the application for a charter is going through the courts at the present time. Formal organization will be affected under the new plan as soon as the charter has been obtained. This change was felt necessary by reason of the enlarged and widely varying character of the work at present carried on by the Council.

Note:—The Books of the organization have been audited by McGehee Fleisher & Company and are available for inspection at the offices of the Dairy Council.

ELEVENTH ANNUAL MEETING INTER-STATE MILK PRODUCERS' ASS'N, Inc.

(Continued from page 1)

Cohee, Mrs. Robert F. Brinton and Mrs. F. M. Twining. Luncheon and entertainment was furnished by the Dairy Council. (Detailed report of this session will be found on page 12 of this issue of the Milk Producers' Review.)

Monday Afternoon Session

The annual report of the president, H. D. Allebach, was presented as the first address at this session. Mr. Allebach reviewed the general program and developments of the year's work and also presented probable future programs. (This address is printed in full in this issue of the Milk Producers' Review.)

J. W. Jones, United States Department of Agricultural Economics, discussed "The Member and His Association." (This address is printed in full in the Milk Producers' Review.)

Hon. R. G. Bressler, Deputy Secretary of Agriculture, State of Pennsylvania, made an interesting address on the "Importance of the Understanding Between City and County in Agricultural Affairs." "Greater knowledge," he said, "between producer and consumer is of vital importance and he believed that the cooperative organization, such as the Inter-State Milk Producers' Association, were among the best agencies to promote this understanding."

At this session R. W. Balderston presented a report of the activities of the Philadelphia Inter-State Dairy Council during the past year. (This report is printed in full in the "Milk Producers' Review.")

Election of Officers

The organization meeting of the Board of Directors of the Inter-State Milk Producers' Association was held on Monday afternoon, when plans and programs for the future were informally discussed.

The following officers were elected to serve for the ensuing year:

President—H. D. Allebach
Vice President—Frederick Shangle
Treasurer—Robert F. Brinton
Secretary—R. W. Balderston
Executive Committee:
H. D. Allebach, Chairman
Frederick Shangle
A. B. Waddington
E. Nelson James
F. P. Willits
Robert F. Brinton
E. H. Donovan

The Annual Banquet

Six hundred and eighty-nine members, delegates and guests participated in the annual banquet of the Inter-State Milk Producers' Association which was held at the Benjamin Franklin Hotel, Monday, November 28th.

Robert F. Brinton, Treasurer of the Association, served as toastmaster.

Following the banquet, addresses were made by Dr. Clyde L. King, University of Pennsylvania, "Cooperating With Ourselves"; A. M. Woodward, Castanea Dairy Company, "Cooperating With the Cooperatives"; Hon. George A. Welsh, Philadelphia Board of Education, "Cooperating With Our Schools"; and Dr. Ralph D. Hetzell, President, Pennsylvania State College, "Cooperating With Our Colleges."

Arthur D. Allen, Secretary of the National Publicity Council, London, England, and Secretary of the World's Dairy Council, to be held in London in 1928, made a brief address as did also

Francis R. Taylor, Esq., Philadelphia, Pa.

The entertainment program arranged by the Philadelphia Inter-State Dairy Council included presentation of The Rules of Health, in tableaux, as presented by students of the Harding Junior High School, Philadelphia. These portrayed: milk, water and cleanliness, sunshine and fresh air, fruit, vegetables, teeth and sleep.

In addition, one of the latest Dairy Council productions, entitled "I'll Tell the World", a milk salesmanship play was presented. "The Dairy Maids" also presented their Sixth Annual Review with songs and dances.

Tuesday's Session

The session opened with visits to the various milk and ice cream plants in Philadelphia, Pa., and Camden, N. J., as well as a visit to the Philadelphia Potato Market. The dairy plants visited included those of the Supplee-Willis-Jones Milk Co., Abbott Alderney Dairies, Inc., Harbison's Dairies and the Breyer Ice Cream Co.

The regular business and educational meeting began at 10:30 o'clock and included addresses by T. E. Woodward, Superintendent of the United States Bureau of Dairying Experiment Farm, Beltsville, Md. Many important facts relative to the breeding, development and care of dairy cattle were ably presented in this address which will be printed in full in the Milk Producers' Review.

Lloyd S. Tenny, Chief, Bureau of Agricultural Economics, United States Department of Agriculture, outlined the functions of that department, particularly in relation to its work in the dairy field.

Dr. Theodore Appel, Secretary of Health, Commonwealth of Pennsylvania, emphasized the growing recognition on the part of the consuming public of the efforts which the dairy industry is putting forth to improve the sanitary production and distribution of milk. On behalf of the medical profession, he expressed the feeling that in the future even greater cooperation should be attained in the matter of safe milk.

New Jersey

Farm Products Show

As the time of the New Jersey Farm Products Show approaches, keen interest is being shown by intended exhibitors. The show will be held in the Armory Building, Trenton, N. J., January 10th to 13th inclusive.

With the prospects of a much larger general exhibit, which includes a number of new features this year, a very large attendance is anticipated.

The organized agricultural associations of New Jersey will hold their annual meetings during the show week and some very interesting programs have been prepared.

House Farm Machinery

Do you put away the farm machinery when you have finished using it? A good tool shed pays for itself in a short time if used. In every community an economic tragedy is being enacted in many farmyards. Machinery stands helplessly exposed to the elements when a few minutes of time would see it under cover.

Hear Ye!

As the street crier of days gone by announced something of importance we wish to announce something of vital importance and interest to

ALL FARMERS

A new farm tractor is on the market. It is a tractor that is an answer to a farmer's prayer. It can do every job that the ordinary tractor does—plowing, tilling, mowing, belt-work, power take-off work and besides cultivate and plant row crops. It is the one all-purpose tractor. It is the feature of power farming today.

It is the tractor that makes the "Horseless Farm" a reality. It is the International Harvester Company's

FARMALL TRACTOR

See your nearest dealer for a demonstration.

International Harvester Co.

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Philadelphia

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GIBRALTAR



WASH TANKS



The up-to-the-minute dairyman does not save money by buying cheap, low-grade cows and bulls—he is convinced that by getting only the best he is practicing real economy. Unfortunately, when it comes to equipment, he often forgets that principle and thinks he is saving money by purchasing poor-grade, inexpensive material.

That is particularly true of metal wash tanks. A good metal tank can not be built cheaply. You are only fooling yourself when you think you are buying a good tank at a cheap price, and surely an article that is in such constant use as a wash tank should be the best obtainable—which is the GIBRALTAR.

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INTER-STATE MILK PRODUCERS' ASSOCIATION

ANNUAL MEETING, NOVEMBER 28th and 29th, 1927

Benjamin Franklin Hall, Philadelphia

ANNUAL ADDRESS OF THE PRESIDENT—H. D. ALLEBACH

(Continued from page 3)

the added effect of greatly increasing the volume of milk coming on to the market in April, May, and June. As a consequence there resulted a considerable accumulation of surplus milk supplies during May and June and these accumulations have persisted until the present time.

Notwithstanding this, your association was able to arrange on December 18, 1926 for a slight modification of the selling plan which has been of great advantage to many of our farmers. By it each producer was accredited on January first, 1927, with the higher of his two fall averages, whether made in 1925 or 1926.

Marketing Plans for 1928

After carefully considering all the factors in the market situation, and the developments following the changes in the plan last year, the Board of Directors approved a modification of the selling plan that was presented to and accepted by the buyers on June 22, 1927. This revised plan was announced in the Milk Producers' Review for July, 1927. It has been fully explained in subsequent issues and its effect in specific instances was elaborated upon in the November issue. It therefore appears unnecessary to explain the revised plan in detail in this annual address. In brief, it makes no radical change in paying shippers who produce a regular amount of milk each month.

Provision is made to pay for, at surplus prices, all milk produced in October, November and December, 1927 in excess of the basic quantity used during the year. During 1928 the established quantity of all producers will be calculated by taking the average of the 1927 basic quantity, and the average production in October, November and December, 1927. The purpose of this provision is two-fold: First, to aid the producer who, through hard luck, produces substantially less milk during the basic months of 1927 than he did in 1925 and 1926; and, second, to enable the market to absorb gradually the increased sales of those producers who are sharply increasing their production this fall over either of the previous fall periods.

Producers who are going through the experience of testing their herds for tuberculosis need some special arrangement for establishing basic quantities. Shippers who, since January 1, 1927, have had their cattle tested for tuberculosis for the first time, may, on formal application to the Association, elect whether they prefer to have their basic average established by the method which applies in general, or continue to have used the basic quantity by which they now are paid. The method of establishing basic quantities for new producers has been worked out with great care so as to be fair to all parties concerned.

Lancaster County Grower 1927 Potato Champion

Amos Eberly, Lancaster county farmer, to date is the 1927 champion potato grower. His yield of 651.4 bushels on a measured acre is the largest reported so far this year to E. L. Nixon, potato disease specialist of the Pennsylvania State College and founder of the famous Keystone 400 Bushel Potato Club.

Eberly plowed under alfalfa sod shallowly last fall and plowed it deeply this spring. He planted 30½ bushels of Seed May 4, spacing his potatoes 29 to 3½ inches. The field received eight tons of manure broadcast and an application of

Board of Directors

The Board of Directors has held its usual bi-monthly meetings during the year. Two of these meetings were held in the field, one in Bedford County, Pa., and one in Sussex County, Del. These field meetings were for the purpose of further familiarizing our directors with actual production conditions in the western and southern parts of "Inter-State" territory.

The Board is directly responsible to the stockholders for the management of the Association's affairs and the development of its policies. Consideration of all questions of importance is taken up after careful investigation by the Executive Committee. The interest of all members of the Board is remarkably well sustained. The average attendance of all meetings this year has been 96.5 per cent. Our Board of Directors actually directs the Association's affairs, and officers and members of the Board are individually giving the business of the Association careful and detailed attention.

Activity on the part of our 281 local units in Pennsylvania, New Jersey, Delaware and Maryland has not been, for the most part as pronounced as we might desire. An entirely satisfactory market situation may be one reason for this. Lack of local problems needing urgent attention may be another. Occasionally it has been lack of adequate local leadership. We need live locals and active leaders in every community. It has been suggested in this connection that a proper method of financing local units should be established. Several plans have been presented and are receiving careful consideration by the Board for the solution of this general problem.

Field and Test Department

The field and test department is one of the most important divisions of the organization. It has given to our members the best service that any department can give. It is a worthwhile service and is very generally appreciated by the membership. During the past year, Frank M. Twining, as Department Director, together with 8 men in the field, have visited 144 plants, have made 86,273 butterfat tests of members' milk, and have added 1,114 farmers to the membership rolls, and adjusted 247 transfers.

Organization

During the past year we have secured 1,207 new members, largely through the efforts of our fieldmen and others, who are cooperating with the Association. During the eleven years of our activities, we have issued 24,932 stock certificates. This does not mean that at the present time, we have that many active members. In order to maintain our active membership we will have to con-

tinue adding an adequate number of new members to our list each year.

The Milk Producers' "Review"

For nearly eight years, the Milk Producers' Review has been bringing to you each month a general review of the milk market, a detailed statement of milk prices, and valuable information in reference to the program and policies of the organization.

We feel that the Review has also filled a definite purpose in publishing monthly, interesting articles pertaining to the industry. The Milk Producers' Review is largely financed through its advertising space, and we believe that whenever possible these advertisements should be considered by our members, should they be in the market for the character and class of goods advertised. During the past year the Review has had an average monthly circulation of 22,150. A. A. Miller, who has been editor of the Milk Producers' Review since its first publication, continues as editor and business manager, while Frederick Shangle has, during the past year, acted as advertising manager.

Statistical Work

We have long felt the need of more adequate statistics with respect to the production of milk in our markets and other information of a like nature.

During the year we have established such a department under the direction of J. O. Eastlack.

This department is now engaged in solving the problem of compiling and revising our records according to the latest and most approved recording and filing systems. Very satisfactory progress is being made in the work, which however, with our large membership, cannot be completed for some months. This new system, will, among other things, enable us to have a record of each producer, and will furnish a simple method of checking market trends.

Dairy Council

A full report of our cooperating educational organization, the Philadelphia Inter-State Dairy Council, will be given by its Secretary, Robt. W. Balderston. This Council was started in 1921 under our auspices, and is very closely affiliated—seven members of its board being members of this Association. The Council's activities have been valuable in developing consumer good will toward the industry on the part of the public, and the satisfactory increase in consumption of dairy products can be directly traced to its efforts.

The Council's Quality Control Department is making substantial progress in securing cooperation of producers and dealers alike in the production of a better quality product for our market. The sanitary regulations given it for enforcement have proven to be practi-

able and fair. It is expected that all producers shipping to cooperating dealers will be requested to hold Permanent Permits issued by this department.

Tuberculosis

The stockholders of the Inter-State Milk Producers' Association at their annual meetings held in 1924, 1925, and 1926 passed resolutions favoring adequate appropriations for remunerating the owners of dairy cattle reacting to the test for tuberculosis. During this three year period, a large number of cities in the United States, some within our territory, have passed ordinances requiring all milk offered for sale therein to come from cows free from tuberculosis as indicated by the Tuberculin Test.

Legislation

During the year the Association has participated in efforts to forward the interests of the dairy farmer through proper legislation, both national and statewide. The Lenroot-Taber bill passed by the last Congress of the United States outlined minimum sanitary and health requirements for the importation of milk and cream into the United States. This measure is a distinct step in advance, safeguarding, as it does, the health of our people, and protecting the milk producers in the United States who are meeting sanitary requirements from unfair competition with uninspected foreign products.

Pennsylvania dairymen and other agricultural interests united again to combat the repeated efforts of the margarine interests to repeal or at least greatly weaken the present oleomargarine law. It is fortunate that the law remains unreppealed and unamended. Pennsylvania has a model law regulating the sale of oleomargarine and it should remain without change on the statute book.

Membership Problems and Plans for the Future

The directors and officers of the association need the whole-hearted help of every member to develop more wide spread and more effective activity in our local units and better coordination of effort between the local groups and the central office.

May I remind you that the measure of the success of any cooperative marketing organization is the service it renders to its members. The organization fulfills its obligations only as its members prosper.

Fellow members, the Inter-State Milk Producers' Association is your association. It has no purpose and no function but to serve you and the thousands of your fellow members back home. Help it to achieve even greater things for you in the future!

Largest State Farm Products Show Planned

Plans for the largest mid-winter farm products show ever held in the eastern half of the United States were approved recently by the Pennsylvania State Farm Products Show Commission.

The Show will be held in Harrisburg, January 17, 18, 19 and 20, 1928, and will cover more than 120,000 square feet of floor space.

Twenty-eight organizations representing the extensive dairy, fruit, livestock, poultry, farm crops, apiary and allied industries of the State will hold meetings during show week.

More than 200 baby beef and dairy

calves to be exhibited by the boys' and girls' clubs of Cumberland, Dauphin, Lebanon, Perry and Union Counties, and exhibits and contests by more than 300 boys and girls taking the vocational agricultural instruction in the high schools of Pennsylvania, will be among the outstanding features of the show.

The State Farm Products Show Commission in its recent meeting took favorable action on the report and recommendations of the Show Committees which represent the various farm and allied organizations cooperating in the arrangements for the twelfth annual exhibition.

The Member and His Cooperative

J. W. JONES

(Continued from page 2)

zation proposes to change and the reasons for these specific changes.

This understanding of purpose includes an understanding of the limitations of a cooperative in respect to price control and practicability of making changes in existing conditions. Because of lack of understanding members often favor making changes that are impracticable. It would no doubt be an easy matter to persuade a considerable part of the members of several milk associations that the cooperative should go into the retail milk business or make other changes in the marketing system unless they know something about the difficulties that would have to be met in making such changes.

With a proper understanding of the purposes and limitations by the members of a cooperative, it is much easier for the management to formulate policies based on a long time view instead of having to do many things for the sake of expediency and which later bring difficulties. A knowledge of price making factors and the effect of price on supply and of supply on price should be common among the membership of a cooperative, so that they can not be stampeded by enthusiastic but ill-advised agitators who charge the officers of the cooperative with favoring the dealers or other such foolish charges.

It is likewise important that the members have a reasonable knowledge of the details of the association's business. Without information the member has no antidote for groundless rumors and malicious gossip concerning the affairs and management of the association.

A study of membership relations recently conducted by the Division of Cooperative Marketing, U. S. Department of Agriculture, indicates that some members of this organization are not equipped with information and understanding of the functions of the association.

Now members who take enough interest in the organization to attend an annual meeting would make a much better showing at answering questions about the association than those who never attend. The thing of interest to you is how the general average of members are keeping informed about the organization and giving it intelligent support. Because you are members of the cooperative body you have a personal interest in how the other members function since they effect your association's well-being and that of your own organization. For this reason your own interests are furthered when you see to it that each member has the same information and understanding of the organization as you have yourselves. For this reason the useful member of a cooperative is one who feels a personal responsibility in disseminating correct information about the cooperative, in seeing that disinterested or disgruntled members attend meetings conducted by the association in helping to promote the health of the corporate body, by keeping the various members free from the virus of misconception and disaffection.

A farm machine that stands out all winter not only depreciates in value, but requires a lot of extra time and patience to get it ready to run when it is needed again.

How Science Aids the Farmer

Dr. Wilmer Krusen, Director of Public Health, City of Philadelphia

In making his welcoming address to the members and delegates of the Eleventh Annual Meeting of the Inter-State Milk Producers' Association, Dr. Wilmer Krusen, Director of Health, City of Philadelphia, said in part:

"I am very glad to have this opportunity of once more expressing the keen appreciation of the city of Philadelphia for the protection which you give to public health in protecting the purity and quality of milk supply."

"I have spoken and I have written repeatedly during the last few years telling the story of the work done by this Association, and I believe my fellow citizens in the city are better posted about the work of this organization than they have ever been in the past."

"In a book I recently read, the author says 'A conservative is a fellow who does not want to do anything for the first time.' Now we all have to do a thing for the first time in order to get anything accomplished in this world, and there is that progressive element in the Inter-State Milk Producers Association which means well for the farmer and for the producer of milk and for the citizen. You are helping the Health Department of the city and state save the lives of babies and that is an important thing."

"Possibly you have seen recently in some publications of a war on modern science. Now, I think that that war is carried on by ignorant, misguided, well-meaning people who do not appreciate what science means, and just for two or three minutes I want to try to explain what science is."

"The farmer with his herd needs the veterinarian. It is veterinary science which insures to the farmer and to this organization the health of the cow, the health of the bull, and the health of the calf. Now that is science, — sanitary science. It is the science of bacteriology which shows how many germs are in a given amount of milk. It is the science of pathology which shows the changes which take place in a cow if subject to tuberculosis. It is the science of health and sanitary science which enables us to transport the product of the dairy from the stable to the refrigerator in the home of the citizen of Philadelphia."

"It is the science of medicine which shows us that typhoid fever is due to the bacilli that may be found in water and may be found in milk."

"It is the science of bacteriology in medicine that shows us that tuberculosis is due to the tubercle bacillus and that it may be of the bovine type and may be transmitted to the child and produce bone or glandular tuberculosis."

"So science is merely the knowledge of the way the miracle of the universe works, and the worker in the laboratory finds out these problems and then we doctors and scientists profit by them. So you see, when you fight science you fight that which is working for the best interests of the race."

"I am simply here to welcome you to the city of brotherly love and to express in emphatic terms my appreciation, the appreciation of the health officers of the city, the appreciation of the citizens, the appreciation of the fathers and mothers, and the appreciation of the children who cannot voice their own appreciation, of the work which you are doing to protect public health in Philadelphia."

Strains 100% Clean or your Money Back

Dr. Clark's Purity Milk Strainer is the only strainer on the market guaranteed to get all the dirt, dust and sediment or your money back.

Because it is the ONE strainer that strains absolutely clean is the reason why it is used and recommended by practically all the large dairies, creameries, condenseries, thousands of farmers, etc.

WHY TAKE CHANCES

when you can use Dr. Clark's Purity Strainer with its sterilized cotton disc and KNOW that your milk will grade 100% clean?

Dr. Clark's Purity Strainers are simple to use and easy to clean—save time—bring you higher prices for your milk. Also best for straining maple syrup, vinegar, cider and home beverages.

Sold by good dealers everywhere. Two sizes, 10 quart and 15 quart. Write for descriptive folder and our 10 Day Trial Test Offer. If your dealer can't supply you, we will.

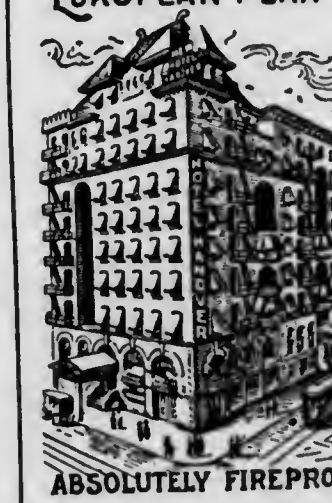
DR. CLARK'S
Purity
MILK STRAINER

10
Day Trial Test

Write at once for our 10 Day Trial Test Offer. Find out how you can test the PURITY Strainer and get your money back if it doesn't remove every particle of dirt from your milk. Get all the facts. A postal or letter brings you complete information "10 Day Trial Test Offer" by return mail.

PURITY STAMPING CO.
Battle Creek, Mich.
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PHILADELPHIA, PA.

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There is No "Off Season" with Jerseys!

In the winter when income from other sources is at the lowest, Jerseys produce persistently and economically.

The steady income from a few Jersey cows will make this season a profitable one for you.

Write for free booklets on
Jerseys and profitable dairying

The American Jersey Cattle Club, Dept. K
324 West 23rd St., New York, N. Y.

Keep Cows in Flesh

A cow in thin condition cannot do her best at the milk pail. The time to put the flesh on a good producer is when she is standing dry. A cow needs a rest of 6 to 8 weeks before freshening and at that time she should be put in condition for her next milking period, say Pennsylvania State College dairy specialists.

One reason why there can be no general panacea for farm ills is because most farming represents a strongly localized industry.

Equal parts of steam bone meal and limestone is the best mineral mixture to supply phosphorus and calcium to cattle; and these two are usually all that is needed.

SECRETARY'S REPORT

R. W. BALDERSTON

(Continued from page 2)

of the problems your board has been discussing and states graphically the present membership situation:—

During the past year, the Board of Directors has held six regular meetings two of them in the field. The Executive Committee has had meetings from time to time whenever necessary. The average attendance at all these meetings has been in excess of 96%.

At the beginning of the fiscal year a committee of the Board prepared the usual budget estimate. This has been closely adhered to. The usual audit has been made by McGee, Fleisher and Co., Auditors, and will be presented as part of the Treasurer's Report.



LADIES' MEETING

Inter-State Milk Producers Ass'n

The Ladies' Meeting was held for the fourth year in the offices of the Association in connection with the Annual Meeting of the Inter-State Milk Producers' Association. It was very gratifying to hear several guests remark "This is my first meeting but I do not want to miss any more".

Members of the staff of the Philadelphia Dairy Council furnished the entertainment as well as the Luncheon which was served in the office as soon as the meeting was over.

Miss Broecker, head of the Nutrition Department, traced the Path of the Gopatis down through the ages. This is a talk given to women's clubs, granges or Farmers' Clubs, showing the development of dairymaking from pre-historic times when the herdsman was called "Gopatis" or Lord of the Herds. It is illustrated by charming silhouettes.

Mrs. Scott McHenry, of Newtown, Pa., gave us a delightful treat by singing two groups of songs.

To present a subject beside milk and nutrition, Clarette Sehon, of the Dramatic Department, told most entertainingly of her experiences in Czechoslovakia when doing Y. W. C. A. work there. While she talked she dressed Miss Bates in a beautiful dress brought from the village which had been her headquarters. Each village has its own individual costume and men and women alike design their own embroidery patterns. The skirt and waist were both very finely plaited by a unique method! The linen is spread on a table, dampened and creased across the goods in a fine tuck which is clamped into place by clamps on either side of the table. Then the next tuck is creased and clamped and so on until the whole length of material is gathered into a very small handful. It is then rolled up in bread dough and baked. The dampness and heat draw out the starch from the flour to stiffen the linen. The heat bakes the tucks into very permanent tucking. The loaf is laid away thoroughly cooked, later the dough is cracked off, leaving an accordion pleating we could hardly attempt in this country.

Many of you enjoyed the little play, "The Winter Coat" given at the Annual Meeting last year. "Listening In" was selected this year because it too was adapted for use in Grange or Farmers' Club meetings as well as at P. T. A. or Women's Clubs. The parts were taken by Louise Everts as Minnie Eames, Ethel Windle as Hattie Carter and Dennis Gantier as Grocery man's assistant, and a very good one he made, too.

This closed the entertainment, planned by the committee. Mr. A. D. Allen, Secretary of the National Dairy Council of England, very willingly spoke to us. He emphasized the need of care of milk on the farm. It must start clean if we expect it to be kept clean each step of the way to the consumer.

Then lunch was served. Cards were distributed which assigned the holder to some one of the offices, each room being in charge of a hostess.

LUNCHEON MENU

This menu was prepared and served by the Dairy Council for the ladies at the annual meeting of the Inter-State Milk Producers' Association.

Vegetable Salad		Sandwiches	
Ice Cream		Coffee	
Cake		Cocoa	

Creamed Chicken and Veal
2 cups diced chicken
1 cup diced veal
2 cups medium cream sauce

Cranberry Jelly
4 cups cranberries
2 cups sugar
1 cup water

Wash cranberries, pour over them the boiling water and cook until cranberries pop open. Stir in sugar and cook about ten minutes, or until it coats on spoon. Pour into moulds or into jars.

Vegetable Salad
1 No. 2 can medium peas

1 cup diced carrots
1 cup diced celery
1 teaspoon onion juice
Served with Mayonnaise dressing

Sandwiches
Part of the sandwiches were made of nut bread and butter, the rest of brown bread with cheese and olive filling mixed as follows:
¾ lb. package Philadelphia cream cheese
1 small bottle olives
Chop olives into cheese, then mix with Mayonnaise or cream.



"Listening In"

Illustration and Brief Outline of a New Dairy Council Play

Two farmers' wives, Hattie Carter and Minnie Eames sit down to telephone Winkel's Grocery store at the same time. Their wires are crossed and they have a friendly chat for a few minutes before they get connection with the store.

Mrs. Carter asks after the Eames family, whom Mrs. Eames reports as "Fair to Middlin' I guess—but not so extra good. The boy ain't strong a' tall. He's growin' I guess. Doesn't eat much, takes after his Maw I s'pose because he ain't no fatter'n a knittin' needle. I keep him to home so's he can git his strength."

"Does he eat the right kind of food, Minnie?" Mrs. Carter asks. "You know so much depends upon proper nourishment—all the strength and happiness of childhood depend upon it."

"He has the same vittles the rest of us have—plain cookin' y'know, nothin' fancy."

"Does he drink milk?"

"He does not! — we have six cows, y'know, an' most all the milk is sent t' the city. The little we use is skimmed for butter an' I give the thin milk to the pigs and the puppies."

"Oh, my dear, what a pity," Mrs.

Carter sympathizes, then offers to send over some interesting books on Child Health. All her children drink milk and love it, too.

At last they are connected with Winkel's store but both together so the complication of crossed wires continues. Mrs. Eames suggests Mrs. Carter orders first. "Perhaps I'll learn somethin'," she adds.

The order is only a simple one but includes spinach, celery, lettuce, oranges and most astounding of all, four quarts of milk and a pint of cream.

Mrs. Eames listens intently then exclaims, "I jest ain't got no sense that's all. Why sure—I've been givin' the milk to the pigs and my Robert starvin' himself for real nourishment."

She duplicates Mrs. Carter's order item for item except the milk. "I don't need no milk or cream either, 'cause our cows are givin' fine an' I'm just goin' to start starvin' the pigs for a while."

"I'm afraid I've started something," Mrs. Carter commented.

"Yes, Hattie—y' started m' brains a-workin'—an' they're goin' to keep right on a-workin' from now on."

The curtain drops while they are discussing how to make custard for dessert.

CRANBERRY RECIPES

Cranberry Relish

4 cups cranberries
1 cup granulated sugar
Put berries through meat grinder and mix with sugar. Let stand 12 to 24 hours. Serve uncooked with meat or poultry. Very good.

Cranberry Conserve

4 cups cranberries
1 cup water
1 cup nut meats
1 cup seeded raisins
2½ cups sugar
1 sliced orange
Cook cranberries in water until they stop popping; rub through a sieve if desired and add nut meats coarsely chopped. Add raisins, sliced orange, and sugar. Cook 15 minutes. Put away in glasses.

Omelet With Cranberry Sauce

Prepare a plain 2 egg omelet. Before folding add 2 tablespoons of cranberry sauce or jelly. Garnish with a little sauce or jelly and powdered sugar.

Cranberry Sundae

Place a generous tablespoon of cranberry sauce over vanilla ice cream. Top with whipped cream and one or two large cranberries selected from the sauce. This makes an attractive dessert.

Cranberry Ice

4 cups cranberries
4 cups water
2 cups sugar
Juice of 2 lemons
Cook berries with water until they stop popping. Strain. Add sugar and cook until it is dissolved. Cool. Add lemon juice and freeze to the consistency of water ice. Very good served as a sherbet.

Christmas Gifts

If you are looking around for a last minute Christmas gift, have you thought of the Dairy Council Cook Book? It can be purchased for 25 cents a copy, at the office of the Milk Producers Review.

Health Habits for \$1.00 will give a mother or teacher many suggestions for starting little folks with the right habits of eating and health.

Sets of health cards for coloring are available in limited quantities at your request. They are splendid busy work for stormy days when the children don't know what to do next.

Clothes in Country and City

Contrary to the commonly accepted idea that farm families spend much less for clothing than their city cousins, an investigation by the Bureau of Home Economics of the Department of Agriculture indicates that clothing allowances are approximately equal in the two groups. Only in families having incomes well above the average is there a wide difference, with city families spending more. In 1,837 farm families covered by the survey the average total expenditure was \$1,559 of which \$225 was spent for clothing. City families with about the same total expenditure averaged \$238 for clothing.

National Dairy Council
Holds Annual Meeting

The National Dairy Council, of which the Philadelphia Inter-State Dairy Council is an affiliated regional unit, held its Annual Meeting in Chicago, Illinois, on December 1st.

Following the customary annual reports, addresses were made by A. J. Glover, Editor of "Hoard's Dairyman", Dr. Herman H. Bundersen, President of the American Public Health Association and Miss Aubyn Chinn, of the National Dairy Council.

The National Dairy Council in its progressive policy, has developed a new form of management, which, it is believed, will greatly add to its progress.

The following officers were reelected. President, M. D. Munn; First Vice President, E. M. Bailey; Second Vice President, J. A. Walker; Treasurer, T. E. Borman, and Clyde Bechtelheimer of Waterloo, Iowa, was elected Secretary pro tem.

In addition to these officers, Dr. C. W. Larson, Chief of the Bureau of Dairying Industry, United States Department of Agriculture, was elected Managing Director of the Council.



DR. C. W. LARSON

Dr. C. W. Larson, who has tendered his resignation as Chief of the Bureau of Dairy Industry, United States Department of Agriculture, effective January 1st, 1928, when he will accept the position of Managing Director of the National Dairy Council, with headquarters in its Chicago office.

Dr. Larson has been chief of the Bureau of Dairy Industry since its creation in 1924. Dr. Larson entered the Department of Agriculture in 1917 and from 1921 to 1924 was Chief of the Dairy Division.

Dr. Larson was born in Mitchell County, Iowa, in 1881, where his home was on a livestock farm. He graduated from Iowa State College of Agriculture in 1906. In 1907 he became a member of the faculty of Pennsylvania State College and in 1913 was made a professor in charge of the department of dairy husbandry. In 1917 Dr. Larson entered the Department of Agriculture and in 1921 became chief of the Dairy Division of the Bureau of Animal Industry.

Dr. Larson's new duties will call for his close cooperation with many important health and educational agencies interested in the welfare and proper nutrition of children, adults as well. He will assume his new duties on January 1, 1928.

The Purina Quart is the Cheapest

Milk Pail Proof

Fingley Brothers, Harford, Pennsylvania, are making \$172.00 per month more on sixteen cows, since they began feeding Purina Cow Chow.

At the Benj. Chew Farm, Radnor, Pennsylvania, ten cows made an extra net profit in one month of \$51.90 on Purina Cow Chow.

Robert Swingle, Lake Ariel, Pennsylvania, has eleven cows which made an extra net profit of \$49.30 per month after he changed over to Purina Cow Chow.

Geo. Frick, Myerston, Pa., found that Cow Chow feeding increased the net profit \$49.20 per month on his ten cows.

C. L. Duckett, Davidsonville, Md., has 15 cows that return \$35.80 extra net profit each month since he began feeding Cow Chow.

The Rice Brothers of Dornestown, Md., have a herd of 60 cows. Recently they started adding \$10.20 worth of Purina Bulky-Las per day to the cows' feed and they are getting back \$16.00 worth of extra milk per day.

If these men can profit by feeding Purina, you can too! Get Purina at the store with the checkerboard sign.

PURINA MILLS, 854 Gratiot Street, St. Louis, Mo.
Eight Busy Mills Located for Service

Let Bulky-Las work with Cow Chow in increasing your milk production

Write us for a Purina Cow Booklet—free

PURINA CHOWS

24% PROTEIN COW CHOW
20% PROTEIN COW CHOW
Calf Chow Bulky-Las Pig Chow

IN CHECKERBOARD BAGS

Philadelphia Inter-State Dairy Council

The various departments are at your service and will assist you in planning
EDUCATIONAL ENTERTAINMENT

for your Community, Local or Club Meetings. Lectures, Speakers, Motion Pictures, Lantern Slides, Etc.
Write us for detailed information and program.

R. W. BALDERSTON, Sec'y, 1811 Arch Street, PHILADELPHIA

Meal Made From Alfalfa Stems

The product made by grinding alfalfa stems should be sold under a name which accurately describes the article and is not deceptive, such, for example, as "alfalfa stem meal," according to a recent statement of officials of the United States Department of Agriculture charged with the enforcement of the Federal food and drugs act. The statement follows:

It has come to the attention of the Administration that certain manufacturers of alfalfa meal are separating the leafy portion, either before or after grinding, and selling the ground leaves under the name of "Ground Alfalfa Leaves" or a similar designation.

"From this separation there results a by-product consisting of stems from which the leaves have been partially or wholly removed. Although this by-product has a recognized feeding value and when ground has some of the physical characteristics of alfalfa meal it is not alfalfa meal and to ship it in interstate commerce and sell it under that name constitutes a violation of the Federal food and drugs act. No objection will be offered to the sale of this product under a name which accurately describes the article and is not deceptive, such, for example, as "alfalfa stem meal."

Delaware County Farm Products Show

The Delaware County Farm Products Show for 1927 was held in Concordville, Pa., in that county on December 1st, 2nd and 3rd.

There were large exhibits of apples, corn and potatoes, as well as various other vegetables. The corn show was of particular interest as was also the display of eggs and mushrooms.

Special educational programs were presented at the evening meetings. These included the dairy play "Judge for Yourself" by the Philadelphia Inter-State Dairy Council. On Wednesday evening the Concordville Grange presented "A Winter Coat" another Dairy Council play, while on Thursday evening the Glee Club of the Cheyney Normal School provided vocal entertainment.

GOLDEN OPERA SINGERS.

Sold only by Cugley & Mullen Co. ON TWO WEEKS' TRIAL. Are canaries that we train in Germany to sing. They are taught to imitate the flute, violin and drums—and to actually out-sing and out-thrill the greatest operatic stars.

FOR THAT "XMAS" GIFT! They sing constantly, morning, noon and night. Let us sell you one of these canaries on two weeks' trial. Then if you are not satisfied that you own the most wonderful canary you ever heard— you may return him and we will refund your money. We assume no obligation or risk.

Last season over 4000 of these birds were sold on trial in the U. S., Canada and Mexico. We guarantee safe arrival. Send for our Price List and FREE BOOK telling how canaries are trained.

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\$25 Kennedy Utility Saw Will cross-cut, rip, plane, groove and tongue plough, mitre, bevel bore, sand rabbit, tenon mortise joint make mouldings, etc. R. M. KENNEDY, 222 N. 7th St., Phila., Pa.

National Cooperative Milk Producers' Federation Holds Eleventh Annual Meeting

The National Cooperative Milk Producers' Federation, held its Eleventh Annual Meeting, on November 15th and 16th, 1927, at the Pfister Hotel, in Milwaukee, Wisconsin.

Spokesmen from the organized dairy farmers of the United States from New England to the Pacific coast, were present and participated in the deliberations.

The session opened with a meeting of the Executive Committee of the Federation, which was held on Monday afternoon, November 14th, at which routine business was discussed.

The formal session opened on Tuesday morning, November 15th, with an address of welcome by Hon. W. A. Duffy, State Commissioner of Agriculture for Wisconsin, which was responded to by F. P. Willits, Ward, Pennsylvania, Treasurer of the Federation.

This was followed by the annual address of John D. Miller, Esq., Susquehanna, Pa., President of the National Milk Producers' Federation. Referring to the general agricultural situation, President Miller said in part:

"The various groups of farmers producing the major farm crops have such a community of interest that anything that helps one helps all—anything that injures one injures all.

"This will continue to be so as long as so many farmers can diversify their production or change entirely from the production of one major crop to that of another.

"Let it be conceded that at present farmers producing dairy products are receiving a relatively higher price than those producing any of the other major farm products. This disparity cannot long continue. Their prices must go up or ours must come down.

"For a long time, and particularly since about the close of the last century, our rapidly expanding financial and industrial concerns have absorbed public attention and agriculture has been subordinated in the public mind.

"The depression in agriculture has now, however, reached a stage when its harmful effects are being felt by other industries and a more wide and intelligent interest is being taken in our agricultural problem."

He further said that: "Cooperative marketing associations must go slow if they are to go safe. They should add to the volume of products handled by them only as fast as they develop personnel and acquire facilities to efficiently handle them.

"Recognition of these self-evident facts has caused some to suggest that during the period that must elapse until farmers are sufficiently organized some temporary agency should be created to buy, hold and sell exportable surpluses of farm crops in a way that will prevent such surpluses from depressing domestic prices below the cost of production."

In concluding Mr. Miller said: "Agriculture is a vital unit in our national life. The farm is more than a place where men, women and children work—it is a place where they live. The farmer is more than a laborer—he is an employer, a manager and a capitalist.

"Farms produce more than food and raw material—they produce young men and women, many thousands of whom are annually drafted to the cities.

"Agriculture, therefore, is more than

an industry—it is an institution that in various ways touches, influences and at times dominates the social, economic, political and ethical life of the nation."

"The decline of agriculture means more than the decay of an industry—it means the decay of men.

"Involved in our present agricultural problem is the possibility of far reaching and harmful changes affecting the vitality of our race; the social, political, educational and ethical standards of our people and in the final analysis our national security."

Annual Banquet

The annual banquet of the Federation was held in the Pfister Hotel, with Charles F. Dineen, Secretary of the Milwaukee Cooperative Milk Producers' Association, presiding and Frank G. Swoboda, General Manager of the Wisconsin Cheese Producers' Federation, acting as toastmaster.

Following the banquet, addresses were made by A. J. Glover, Editor "Hoard's Dairyman"; John D. Miller, President, National Milk Producers' Federation; Harry A. Bell, Milwaukee Association of Commerce; F. P. Willits, Treasurer, National Milk Producers' Federation; N. P. Hull, Michigan Milk Producers' Association; Harry Hartke, Cooperative Pure Milk Association of Cincinnati, Ohio, and Charles W. Holman, Secretary, National Milk Producers' Federation.

During the banquet vocal selections were given by the Guernsey Quartette of Barron County, Wisconsin.

Wednesday's Session

The session opened with a brief address by former U. S. Senator Irvine L. Lenroot, in which he complimented the Federation upon its sound legislative policies. "No favors," he said, "have been asked until tested by constitution and economics principles."

Addresses were also made by various representatives from the member organizations.

Executive Session

The delegates meeting and executive session of the National Milk Producers' Federation, was held on Wednesday afternoon.

Reports were received from the Credentials Committee, H. D. Allebach, chairman; from Frank P. Willits, treasurer and from Charles W. Holman, secretary.

President—John D. Miller
First Vice President—C. E. Hough
Second Vice President—Harry Hartke
Treasurer—Frank P. Willits
Secretary—Charles W. Holman

Executive Committee
John D. Miller Harry Hartke
F. C. Swoboda Frank P. Willits
C. E. Hough John Brandt
N. P. Hull

Alternates 1928
G. W. Slocomb R. Smith Shader
Clyde Bechtelheimer

Resolutions
The following resolutions were among those adopted by the Federation:

WHEREAS
Richard Pattee was the leader among the early and aggressive organizers of the dairy industry in New England.

AND WHEREAS
He was for years a member of the Board of Directors, the Executive Com-

mittee and First Vice President of the National Cooperative Milk Producers Federation.

AND WHEREAS

He was not only one of our most active, capable and influential workers, but by his kindly ways, his well-considered advice, and his willingness to sacrifice his personal interests for a cause he endeared himself to us all.

AND WHEREAS

The Great Reaper has seen fit to call him to the Greater Fields beyond, therefore, be it Resolved that we mourn his passing, that we extend to his family, and to his associates of the New England Milk Producers Association our heartfelt sympathy.

AND FURTHER BE IT RESOLVED

That a copy of these resolutions be spread on a page of our permanent records and that such page be dedicated to the memory of Richard Pattee and that copies be sent to the family and to the office of the New England Milk Producers Association.

J. D. MILLER,
F. P. WILLITS,
N. P. HULL,
Committee.

Resolution

The Federation urges that adequate appropriation be made by the Congress for expanding the division of cooperative marketing in the Bureau of Agricultural Economics in the Department of Agriculture and particularly for expanding the direct efficiency service to cooperatives on request.

Resolution

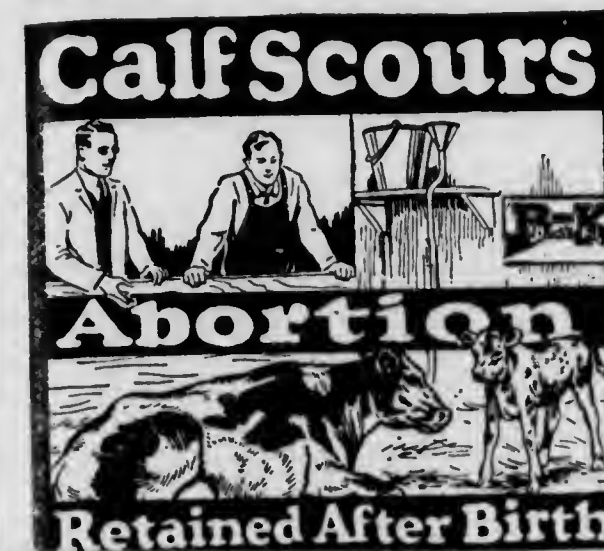
Appreciating the value to the dairy industry of the United States Government market information with respect to the production of dairy products and their distribution in the larger markets of the country, the Federation urges extension of this service, by the Bureau of Agricultural Economics, and particularly to the extension of the information service with reference to movements of milk and cream into all metropolitan areas receiving substantial quantities of car lot shipments of these products.

The Federation further urges adequate appropriation to be made by the Congress to the Department of Agriculture for financing this additional service and also for adequately financing technical dairy research conducted by the Bureau of Dairy Industry.

Resolution

It has long been the policy of the Federal Government to fully protect American industry by means of import tariff duties. We believe that the industry of agriculture should have an equivalent protection. To do so would bring a great measure of relief to American farmers now suffering from an economic depression, caused in part by the Federal Laws and acts of duly constituted Federal authorities. As a partial correction of this inequality, we therefore ask of the Congress of the United States, the immediate passage of a tariff bill which will place adequate duties on farm products and all the raw products imported into the United States which either directly or by substitution come into competition with products produced by farmers of the United States.

We further urge the Congress to levy an Excise Tax on all vegetable oils and raw materials from which such oils are produced that are imported into this country from the Philippine Islands.



Calf Scours is easily prevented and controlled by disinfecting new-born calves with dilution of B-K, and feeding them a little B-K. Get our book on Scours. For removing **Retained Afterbirth** B-K in warm water loosens adhesions, stops inflammation, prevents fever and odors. The afterbirth comes away naturally; the parts are restored to health.

B-K is Concentrated you add water to use, the dilution costs **Only 1/2 to 2c a Gallon**

The germ destroying power of B-K is 10 times greater than that of undiluted carbolic acid. B-K destroys germs by chemically dissolving them, yet B-K contains no poison, or acid, and leaves no odor.

B-K represents 15 years of scientific work. It is made by our exclusive process, producing the only stabilized hypochlorite ever approved by the American Medical Association.

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Pennsylvania

Dairymen's Assn.

Harrisburg Meeting
The Pennsylvania Dairymen's Association will hold its annual meeting, on January 18th, 1928, during the period of the Pennsylvania Farm Products Show.

The sessions will be held in the Senate Census Room, in the State Capital Building.

The annual Banquet of the Association will be held at 6:30 P. M., in the Banquet Hall of the Masonic Temple.

The following detailed program of the meeting has been announced.

Wednesday Morning

9:15 Call to Order.

President's Address.

9:30 Securing Maximum Milk Production at a Minimum Cost.

Mr. E. J. Perry, Extension Specialist in Dairying College of Agriculture, New Brunswick, New Jersey.

10:15 The Use and Abuse of Protein in the Rations of Dairy Cattle.

Dr. F. B. Morrison, Director New York Agricultural Experiment Stations, Geneva, New York.

11:15 Economic Aspects of T. B. Testing.

Dr. J. A. Kiernan, Chief of Tuberculosis Eradication Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C.

Wednesday Afternoon

1:30 Business Session.

1:45 What the Distributor Expects of the Producer in the Matter of Quality in Milk and Why.

Mr. H. D. Davis, Production Manager, The Supplee-Wills-Jones Co., Philadelphia, Pennsylvania.

2:15 A Practical Plan of Ridding the Herd of Contagious Abortion.

Dr. E. S. Deubler, Superintendent, Penuhurst Farm, Narberth, Pennsylvania.

2:45 Should Minerals be Added to Dairy Rations.

Dr. Morrison.

3:15 Dairy Herd Improvement Through the Sire.

Mr. J. H. McClain, in Charge Dairy Introduction, Bureau of Dairy Industry, U. S. Department of Agriculture, Washington, D. C.

Wednesday Evening

6:30 At Masonic Temple, Banquet Hall.

The Dairymen's Banquet

All Dairymen, their families, and friends invited.

E. B. Fitts, Toastmaster

Short talks by

Dr. C. G. Jordan, Secretary of Agriculture.

Dr. R. D. Hetzel, President, Pennsylvania State College.

Dr. F. B. Morrison, Director, New York Agricultural Experiment Stations.

Address—"The Three Legged Stool of Big Business".

Dr. H. E. Van Norman, President, American Dry Milk Institute. Former President of World's Dairy Congress and of the National Dairy Association.

Announcement of awards to Dairymen in Cow Testing Associations who have done meritorious work during the past year.

Announcement of winners of prizes in the milk show.

Get Milk for Grain Fed

Feed grain to dairy cows according to their production of milk. Records show that many cows are overfed while others are underfed. Feed one pound of grain to each 3 or 3½ pounds of milk for Guernseys and Jerseys and one pound of grain to each 3½ to 4½ pounds of milk for Holsteins and Ayrshires.

Milk Exhibit, Penna.

Farm Products Show

Dairymen and milk distributors who wish to enter the contest for awards, to be given by the Dairy Products Department of the Pennsylvania Farm Products Show, to be held in Harrisburg, Pa., January 17th to 20th inclusive.

Entries for the Milk Show should be prepared on Wednesday, January 11th and forwarded so that they will arrive in Harrisburg not later than Friday, January 13th, before 5 o'clock.

In preparing these samples for the Show extreme care should be taken to see that the barn is well ventilated and free from odors. In packing for shipment use bottles that are not chipped or cracked and be sure that the pouring lips are protected. Use a paraffin cap and then tie either tin foil or parchment paper over the top and around the neck of the bottle. Place in a box well packed with ice, do not use salt.

Samples must be expressed, prepaid, addressed to Pennsylvania Farm Products Show, Milk Exhibit, care of Swift and Co., 7th and North Street, Harrisburg, Pa.

Be sure to place your name and address on the shipping box, as well as on the inside, together with the sample.

Special Prizes to be Awarded

A certificate of merit will be given to all exhibitors whose milk scores 96 or better.

A silver loving cup, presented by the American Jersey Cattle Club will be given for the best sample of milk produced by registered Jersey herd, free from tuberculosis.

The Pennsylvania Federation of Holstein-Friesian Clubs will give a silver loving cup for the best sample of milk, either a purebred or grade Holstein herd. A special prize of a Stewart Clipping Machine will be given by the Philadelphia Inter-State Dairy Council, for the best sample of milk produced by the farmer holding a Permanent Permit, issued by the Dairy Council. A silver loving cup will be given by the Eastern Guernsey Breeders Assn., for the best sample of milk from a registered Guernsey herd, free from tuberculosis.

These awards will be made at the Pennsylvania Dairymen's Banquet, January 18th, 1928.

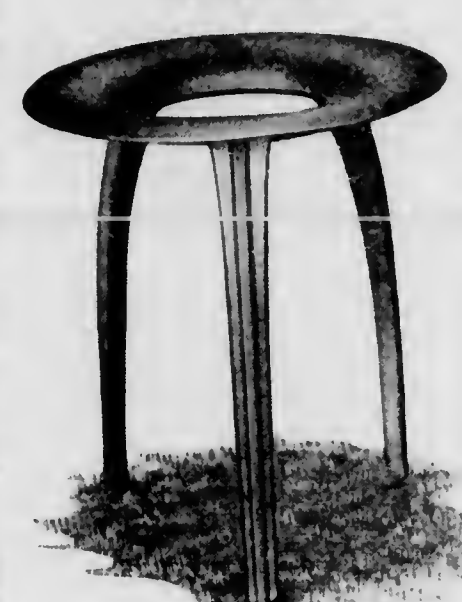
Report of the Quality Control Department, Philadelphia Inter-State Dairy Council.

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of October, 1927.

No. Inspections Made	2,695
No. Sediment Test	3,910
No. Meetings Held	1
No. Reels Movies Shown	3
Attendance	25
No. Miles Traveled	19,455
No. Man Days, Fairs and Exhibits	31
No. Temp. Permits issued up to October 31st, 1927	24,149
No. Permanent Permits issued up to October 31st, 1927	10,253

During the month 39 dairies were discontinued from selling for failure to comply with the regulations—34 of which were reinstated before the month was up. To date 85,029 farm inspections have been made.

The Landsdowne Milking Stool



won't Wear Out Unfasten Crack Rust Rot

Cherry-Bassett Company

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BEST STABLE MANURE IMPROVER KNOWN

Bigger Crops. Regular Profits. 100-lb. Trial Bag with directions, \$1.00 f. o. b. \$4.00 to \$8.00 per animal saved yearly.

Agents wanted RUHM PHOSPHATE & CHEMICAL CO. Dept. N Mt. Pleasant, Tennessee

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in HIGHTSTOWN, N. J. We handle all kinds of cattle

Holsteins — Guernseys — Jerseys A Specialty

All cows tuberculin tested and sold subject to a 60 or 90 day retest and fully guaranteed in every respect. Free delivery any distance.

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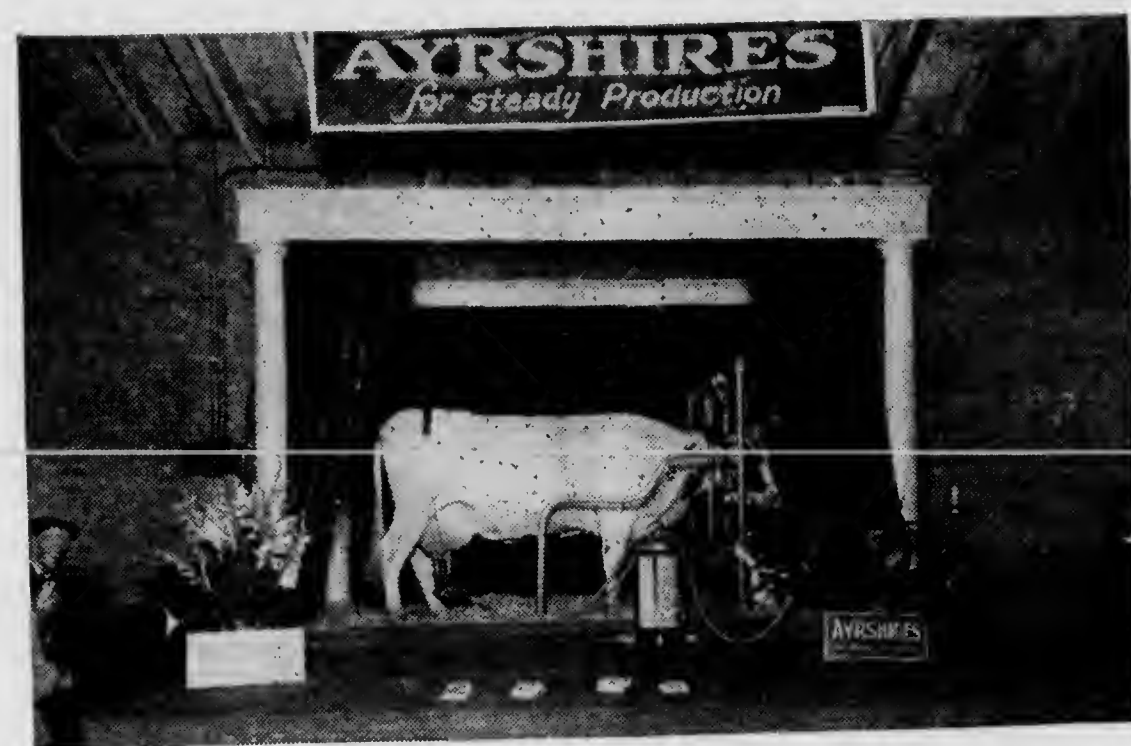
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Tuberculin tested. Guernseys, Jerseys and Holsteins from accredited herds. Priced to sell. Carload lots a specialty.

JACOB ZLOTKIN Phone 330, FREEHOLD, N. J. "The Man Who Sells Good Cows"



The splendid exhibit of the Ayrshire Breeders' Association attracted marked interest at many of this year's big shows. The Association selected the De Laval Milker to do the milking in this exhibit and a special glass pail was provided in order that the audience might see the milk flow. Large crowds witnessed every milking.



The New York State Guernsey Breeders' Ass'n staged a most interesting exhibit which was a center of interest at the New York State Fair. In a model dairy barn erected on the grounds seven purebred Guernseys were kept and the milk sold to an appreciative audience. This Association also selected the De Laval Milker for its exhibit.

De Laval Milkers were at the Shows and Fairs with the Breeders and Breed Associations

VISITORS at many of the noted shows and fairs this season had an excellent opportunity of seeing for themselves the extent of the confidence that the various breed associations and the breeders themselves place in the De Laval Milker.

The Ayrshire Breeders' Association and the New York State Guernsey Breeders' Association each selected the De Laval Milker for use in splendid educational exhibits that evoked interest and commendation from all who saw them.

Prominent herds like the Munroholm Guernseys owned by Mr. Thomas Munro, Camillus, N.Y., and the Shelter Valley Holsteins owned by Messrs. R. M. and J. H. Stone at Marcellus, N. Y., were milked during their entire sojourn at the fair grounds with the De

Laval Milker. The fact that prominent breeders place sufficient faith and confidence in the De Laval Milker to see to it that their valuable show herds have the advantage of De Laval milking even when away from home on the show circuit is extremely gratifying. It clearly demonstrates the point that wherever better milking and greater production are sought after the De Laval Milker is considered the only solution by those with whom these are such vital problems. And for the dairyman who produces a low bacteria count milk, the De Laval Milker has a combination of sanitary features that are undefeatable.

Write to the nearest office for complete information, or if you prefer ask to have a De Laval representative call at your home.

De Laval Milker

THE DE LAVAL SEPARATOR COMPANY

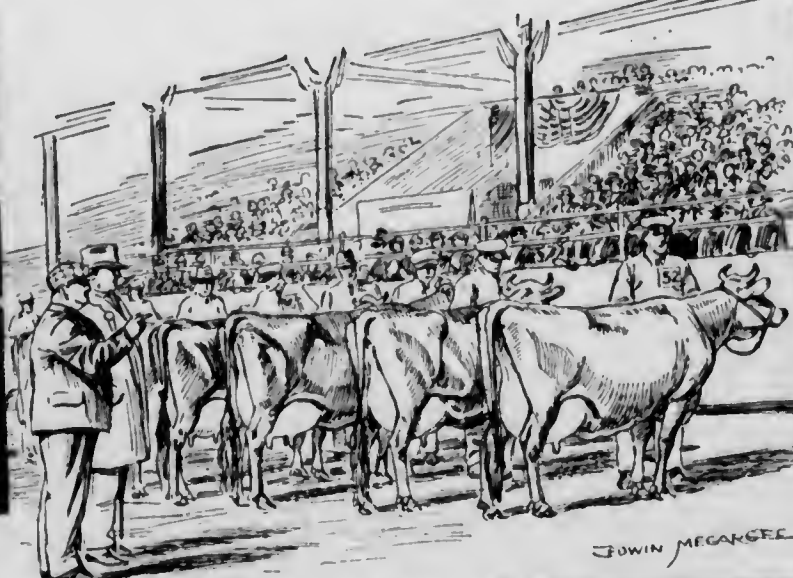
NEW YORK
165 Broadway

CHICAGO
600 Jackson Blvd.

SAN FRANCISCO
61 Beale St.



Above: The splendid Guernsey show herd of the Munroholm Farm, owned by Mr. Thos. Munro at Camillus, N. Y., at the New York State Fair, where they were milked with the De Laval Milker as in the home barn. Right: Part of the noted purebred Jersey herd kept at Ashland Farm, Chattanooga, Tenn. This herd is said to be one of the finest in the South and captures prizes wherever it goes. Mr. J. O. Key, manager, says that the De Laval Milker is a great aid in making maximum production.



Another renowned herd that was made to feel at home with the De Laval Milker at the New York State Fair was the Shelter Valley Holstein show herd. This herd, which is owned by Messrs. R. M. and J. H. Stone of Marcellus, N. Y., received much attention from Holstein fanciers and fanciers of fine cattle in general. To their credit it may be said that this interest was not confined to the audience alone for the judges saw fit to permit individuals of the herd to carry home several valued awards.

Milk Produce Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

Volume VIII

West Chester, Pa., and Philadelphia, Pa., January, 1928

Number 9

A Philosophy of Production*

RAYMOND G. BRESSLER
Deputy Secretary of Agriculture for Pennsylvania

Have you ever tried to count the many operations, that are performed in getting a bottle of milk on to the dining table of any restaurant or hotel in this city for instance? Is it fair to begin with the milk at the bottling plant? I think not. Shall we begin with the product as it comes from the cow? That, too, is not back far enough. Since we can

own business that other human beings must work for nothing.

In the long run, that service which is paid for is always more efficient than gratuitous service, but the world, however, would be plunged into the Dark Ages were all gratuitous service abandoned. Whenever a man performs an act that benefits his fellowman he is

Field and Test Department Report*

F. M. TWINING
In Charge of Departmental Work

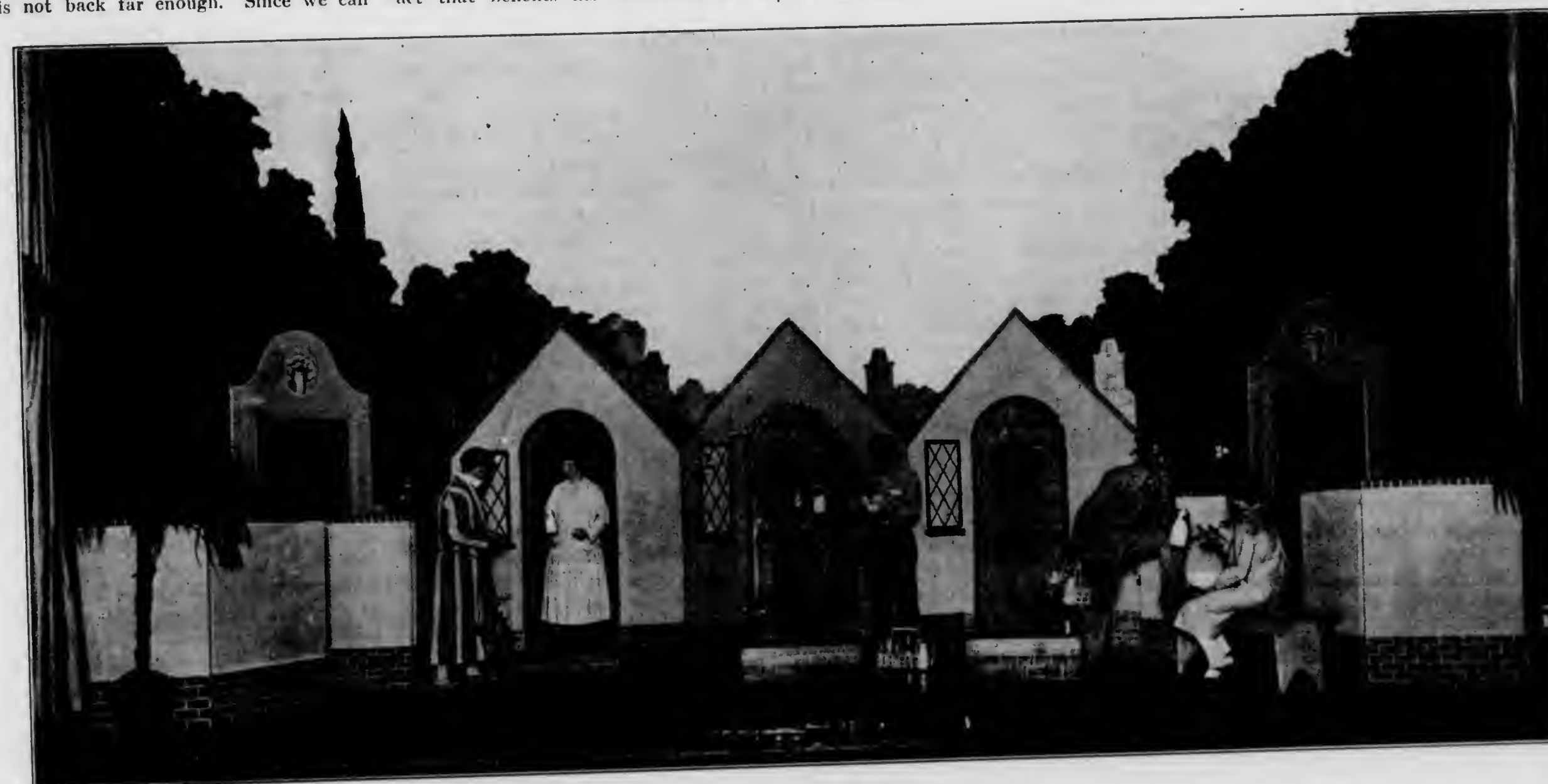
The most interesting feature of the work of the field department of the Inter-State Milk Producers' Association has been the constantly widening variety of types of service rendered by the fieldmen.

When the department was first organized, only about 10% of the calls made on dairymen were made on active mem-

less each year, showing that the larger dairyman sees the advantages of membership more quickly than the men with only four or five cows, who does not specialize in milk production.

Check Testing

The check testing service reached each one of the 144 cooperating milk plants



Scene from "I'll Tell the World"
A new Dairy Council play about the trials and tribulations of the boys who deliver the milk through the dark city streets each morning. Primarily this play was arranged as a Milk Driver Selling Service, but it has met with great enthusiasm wherever it has been shown.

never get to the remote source of things we will take our beginning on the farm. All the manifold operations of planting, harvesting, storing and preparation of feed are individual services that the dairyman is performing for the people in the city who drink the milk. The man who feeds the cows and the individuals who milk them are all rendering service for the benefit of others as well as for themselves. The truck drivers who carry the milk to the stations, the railroads that transport it to the market; the operators who process the milk and prepare it for bottling; too, are performing a service. The drivers on the wagons who distribute the product; the individuals who furnish the capital by means of which distribution can take place; the labor that makes possible the placing of a pint of milk on your breakfast table; one and all have a hand in the service that is necessitated because of a complex industrial development. Everyone must be paid for his labor. All along the line there has been service which had to be paid for and no individual or organization of individuals has a moral or legal right so to conduct its

performing a service. It does not make any difference whether that act is plowing a field for corn, digging coal from the storehouses of the earth, passing over the counter a quart of milk, transporting from the West Indies a bunch of bananas, preaching a sermon, or teaching a Sunday School Class. It is service which must be performed and which eventually, must bring some remuneration.

The one outstanding tendency in all the five institutions that have come down to us from antiquity—the family, the school, the church, the industrial order and the state—is the evolution from a static to a dynamic condition, from a fixed order to one of flexible adjustment. In all of them we have moved forward to a condition of equality, justice and good will with the idea of service for the common good of humanity uppermost. Tremendous strides have been made in the literary expression of this ideal and some considerable progress in the actual attainment thereof. But there remains much to be done before we can truly say that

members of the Association, and ninety per cent (90%) on non-members for the purpose of soliciting their membership contracts.

In 1926, 25%, and in the year just past—38% of our farm visits have been made on members of the Association for the purpose of helping them with their individual problems. This shows a very satisfactory tendency on the part of our members to constantly make more use of the various kinds of service which we are prepared to render, and also that we have given the kind of service our members have needed.

We made altogether a total of 4,418 farm visits during the past year. The various purposes of the visits to members have been to assist with testing and production problems, to check weights, to adjust errors, to help find new markets, and to arrange for local meetings.

We succeeded in signing 1134 new members during the twelve months beginning Nov. 1, 1926 and ending Nov. 1st, 1927. The total number of cows signed was 7,731. The average number of cows per new member grows slightly

in the territory at least eight times during the year. A total of 82,895 samples were tested for our members for the purpose of determining the accuracy of the tests used by the buyers for payment for milk purchased.

Each year since this work was started we have been able to report improved conditions over the previous year. At first we found about 10% of actual testing errors. At the end of two years about 5%. In 1926 about 1%, and in 1927, I am glad to report that there were only about 88/100 of 1% of dealers' errors found.

Personally, I do not feel that the greatest benefit of this service is so much in the number of actual errors corrected, as in the kind of improvements which are brought about that cannot be shown by any kind of mathematical estimate.

The care in taking samples of milk, the manner in which samples are kept, and the condition of the equipment used, are fully as important as the test operation itself, and we are able to report continual improvement along these lines also.

(Continued on page 9)

(Continued on page 13)

A Result of Some Experiments in Milk Production*

T. E. WOODWARD, Superintendent
U. S. Bureau of Dairying Experiment Station, Beltsville, Md.

When a person wants a position with the Government he takes an examination and furnishes references. Before he is given a position however, his references are written to and asked in regard to his character, ability, industry, etc. But the most valuable of the questions asked is whether you yourself would give the applicant employment in a position such as he seeks. A person may be honest, capable and industrious and still be an undesirable person to employ. It is much the same with experiments. The facts brought out by some investigations can not well be put into practice on account of the expense, the labor or some other reason. Now I am going to try to tell you something of our work at the Beltsville Experiment Station and at the same time try to answer the question—"What would you do on a farm of your own?"

If I were running a dairy farm of my own I think one of the first things I would try to do would be to arrange the cropping system to as to obtain the best, the surest and the most economical supply of good cow feed. To do this it may be necessary to keep some simple records of the costs and yields of the various crops. This will require not more than a few minutes a day. Besides it provides a person with a knowledge of the profit or loss on each crop, just as the keeping of cow records increases a person's interest in dairying.

We have been keeping accurate crop records at Beltsville for 14 years and as a result of these records we found years ago that corn, alfalfa and pasture grass were the most profitable crops that we could raise. Consequently our rotation has been made to consist of corn 3 years, alfalfa 3 years and the same right over again. The pasture being more or less permanent does not figure in the rotation. Now then of course you may find these same crops are not the most profitable under your conditions. But whichever ones are found to be the most profitable, these are the ones which should be raised. The next thing then is to arrange the rotation accordingly and when this is done, stick to it at least until some better one is found.

After I had determined about how much feed could be raised every year, I would try to keep just so many head of stock as would enable me to use the feed provided without any considerable surplus or deficit. Economical production demands that the rough feed at least be home grown. A little figuring will convince anyone that he can not get ahead in the dairy business if he buys all his feed. And the less of it he is obliged to buy, the better off he is.

One of the crops I would raise is some sort of legume hay. This is necessary for the sake of the fertility of the soil and also for the sake of the proper nutrition of the cattle. I would make sure that the pasture contained grasses that would produce the most milk to the acre. In many places they are finding that sweet clover is superior to bluegrass. Four years of experimentation with sweet clover on our farm has shown that the sweet clover produces a little more grazing but that it costs a little more than a permanent pasture of orchard grass, timothy, red top, bluegrass, red and alsike clovers.

I think I should explain that our soil is a heavy clay favorable to the growth

of grass but that on account of its nature the sweet clover freezes out badly in the winter. Soils containing more sand are probably no better for grass but they might be better for sweet clover. I feel therefore that our results may not do entire justice to the merits of sweet clover. Another thing, in reseeding the sweet clover the ground was plowed and sweet clover seed purchased on the market. Now it is possible that this reseeding could have been accomplished at slight expense by merely disking and harrowing the old sweet clover field on which there was considerable seed, or it may be that some nurse crop as wheat or oats could have been used and enough realized from such a crop to have more than paid for reseeding the sweet clover. In any event sweet clover seems well worthy of a trial.

One of the greatest developments in agriculture in the future is going to be the substitution of machinery for men and horses. Farm operations will not only be speeded up but they will be made easier. In order to make use of the labor saving machinery, one or all of several things will happen: farms will be larger or there will be cooperative organizations for the production of crops just as there are now cooperative organizations for the marketing of products, or there will be big outfits which will go from farm to farm performing the various farm operations from plowing to harvesting.

Just to give a glimpse of the possible saving, we were able this year with a tractor and corn binder equipped with an elevator for delivering the bundles of corn to a wagon driven alongside, to cut and put in the silo as much as 57 tons of corn in eight hours using a crew of 8 men. When the cutting and loading are both done by hand we have never been able to equal this even with twice the number of men. Another thing, we are able with a crew of 6 men using a hay loader, slings on the wagon and a motor driven hoist for unloading, to put a ton of hay in the barn from the window every 20 minutes. A number of years ago to have done this in twice the time would have been considered good work. Now I hope no one will get the idea that I am trying to hold up our practices as models of excellence. Far from it. I merely mentioned these two matters to show how the machines of the future may speed up production and save labor. If I were running a farm of my own I would try to make use of the various labor saving devices and if my own farm was not large enough to justify the expense of such equipment I think I should try to establish some sort of working agreement with my neighbor or neighbors.

Now before I leave this matter of crop production I want to tell you about another matter. Last year we filled our four silos without tramping—just blew it in and let it fall where it would. We noticed however that the cobs collected much in one place and we were afraid that they would trap enough air so that mould would develop. Every hour or so a man would dig into the conical mass enough to give the cobs a fresh place to collect. The silage kept in good condition and as much was put in the silo as in previous years when tramping was practiced. This year we did not even bother to prevent the collection of

cobs in one place. When a silo is filled in this way the lighter portions of the corn are blown to one side. Then when the silage is removed, unless a person takes a layer off the entire surface of the silo, he is likely to get a feeding containing a preponderance of either leaves or the heavier parts of the corn plant. So far as our work has gone, it appears that tramping of silage is labor lost.

As to the herd, I should make a determined effort to get and then to maintain cattle free from both tuberculosis and abortion. How this is to be done can best be told by a veterinarian. But certainly I should take every precaution in order that years of painstaking care and breeding might not be lost through either of these diseases. Eleven long years of abortion and sustaining losses that no ordinary dairyman could endure has convinced me that an ounce of precaution is worth all the cures that were ever concocted.

Having obtained a healthy herd I should try to improve it by breeding. I should aim to raise at least as many helpers as would be required to replace those lost through age, inefficiency or for other reasons. To do this the proper selection of a bull is all important. A person can breed down as fast or faster than he can breed up. The only way to tell how good a bull is, is to examine his daughters. Get a proved bull if possible. If such a bull is not available or the price is greater than the size of the herd would justify, get a young bull with good records behind him. But in examining the records take into account under what conditions they were made. Results at Beltsville show that records made under advanced registry conditions where the cows are milked 3 times a day, fed rather heavily and breeding deferred, are 50% greater on the average than records made under what might be termed good farm conditions. In other words a 400 lb. cow testing association record is equal to a 600 lb. advanced registry record.

As to how I would go about raising the calves would depend upon how I was disposing of my product. If skim-milk was available I would use it by all means. But if I was selling whole milk I would use some sort of calf meal with only whole milk enough to get them properly started. A total of 300 lbs. is all that is necessary. A good cow should give enough milk the first ten days of her lactation period to raise a calf. It does not seem that the amount of whole milk required is a vital objection to the raising of calves in dairies where whole milk is sold. In a herd of much size there is usually some unfit for human use, milk such as that from fresh cows or cows affected with garget. This milk can be used for the calves.

Of the calf meals that we have tried at Beltsville the most successful are those that contain some sort of animal protein such as blood meal, skimmed milk powder or dried buttermilk, and of these the milk powders seem more efficient than the blood meal. A good calf meal can be made up of finely ground corn 50 parts, linseed oil meal 15 parts, rolled oats (ground) 15 parts, skimmilk powder 10 parts, dried blood flour 10 parts, salt 1 part. Our practice is to start feeding the meal when the calf is say 10 days old and gradually increase the meal as the milk is decreased until

at the age of 50 days the calf is getting all meal and no milk.

Now about stabling the cows, we have tried the open shed, the box stall, the stanchion and the Hoard or Way stall. The open shed was compared with a closed barn equipped with stanchions. In favor of the open shed we can say that the cows produced a little more, that they kept cleaner, that coarse materials such as corn stalks can be successfully used for bedding, and that the open shed is the best known way of preserving all the fertilizing ingredients of the manure. In favor of the stanchions we can say that the cows ate less, that less bedding was used and that less labor was required. In view of the greater space required for cows in the open shed and the advisability of providing a separate milking stable large enough to accommodate a good portion of the herd, it would seem that the first cost of the stable would be greater in the case of the open shed. All things considered I think I should prefer the closed barn and stanchions to the open shed.

The box stall was compared with stanchions and it was found that the box stalls increased production less than 5% which was not enough to pay for the extra bedding used, not to mention the increased first cost and the much greater labor cost in doing the work. Box stalls can not be advised except for sick cows or cows that are freshening.

The Hoard or Way stalls are quite similar. They were compared in a small way with both box stalls and stanchions as regards quantity of production and cleanliness of the cows. Cows in box stalls produced a little more than when in the Hoard or Way stall but they failed to keep as clean. The Way stall and the stanchion ranked about the same as regards production, cleanliness and quantity of bedding used. The Way stall allowed the cows considerably more freedom of movement but was not so convenient for cleaning nor for turning the cows in and out of the stable. There seems to be less likelihood of the cows lying down with their udders in contact with the cold floor when in the Way stalls on account of the bedding staying under the cows better. The Way stalls call for longer platforms than do the stanchions which means a wider stable and greater expense.

We have done some work in trying to determine the effect of milking cows three times a day instead of twice. For short periods of say a month or so it appears that milking 3 times a day increases production about 12 or 13%. For whole lactation periods the increase, as nearly as we can guess from the data available is about 20%.

Now the question is will it pay? This depends for one thing upon how much milk the cows give. Obviously it will not pay to milk a low producer more than twice a day. It will also depend upon the price of the product and upon the cost of doing the milking. This is a matter which must be figured out by each individual dairyman. If a person's cows are yielding an average of 30 lbs. milk each day on twice a day milking, probably they would give 36 lbs. on 3 times a day milking. 6 lbs. of milk from each cow would have to be worth

(Continued on page 7)

Cool Milk During the Winter Sound Advice for the Milk Producer

One of the most important factors in the production of milk, not only in the summer but in the winter season as well, is the proper cooling of the milk in water, promptly after milking.

Many dairymen do not properly cool their milk during the winter season, feeling perhaps that with the lower temperatures it was unnecessary to do so. This is a serious mistake. A few suggestions follow.

1st.—Every quart of market milk should be thoroughly cooled directly after milking so as to remove the animal heat in the milk. Unless this is done the flavor of the milk will not be satisfactory. Milk of good flavor commands itself to the consumer.

2nd.—Milk after cooling should be properly cared for. Milk should not be permitted to remain in the stables where undesirable flavors or odors may be absorbed.

3rd.—Milk should not be permitted to freeze. Frozen milk usually results in a monetary loss to the producer. When milk freezes in the can it is always the top or cream section that freezes first. Such freezing makes it difficult to properly sample the milk for butter fat test on its arrival at the point of delivery. Frozen cream does not pass through the tank strainer at receiving stations and some of this cream is lost in taking samples for testing. Frequent losses in butter fat contents may be traced to conditions of this kind.

Cooling in water is the best assurance against freezing. The water in the tank should be deep enough to permit the cans being immersed in the water up to their necks, and in every case the water should be higher on the outside of the can than is the milk on the inside of the can.

Changing the water daily in the cooling tank will prevent the freezing of milk when cooling in water.

Well water pumped into the cooling tank will not freeze over night to a sufficient extent as a rule to freeze the milk, providing the water is higher on the outside of the can than the milk is on the inside.

An added precaution in preventing freezing is to cover the cooling tank with a lid. When this is done, a tight lid

should be constructed of two thicknesses of tongue and groove boards with a layer of building paper between. This lid can be hinged at the back of the cooling tank in such a manner as to permit its being lowered so as to completely cover the tank after the milk placed therein has been properly cooled. Farmers have suffered considerable loss in the past month because of failure to cool milk properly. A number of dairies have been discontinued because of the failure to cool the milk and at some plants milk has not been received in as good condition during the cold months as the milk taken in at the same plants during the summer.

Preserve your market, by cooling your milk promptly in water every day in the year.

More Milk From Fewer Cows Is Possible, Says U. S. Dairy Bureau

An additional 2,000,000 people each year for the next 40 years could be supplied with as much milk as is now used per capita without adding to the number of cows in the dairy herds, if each cow would produce 100 pounds more milk each year, C. W. Larson, former chief of the Bureau of Dairy Industry, says in his annual report to Secretary of Agriculture Jardine.

The dairy herds of the United States include about 22,000,000 cows. About 400,000 of these, owned by members of dairy-herd-improvement associations, are tested each month for milk and butterfat production, enabling owners to eliminate unprofitable cows from the herds. In 1926, Doctor Larson states, on the basis of comparative records, 360,000 of these cows produced as much milk as 584,000 average cows, and returned as much profit over cost of feed as 640,000 average cows.

The average annual production of the cows in dairy-herd-improvement asso-

ciations in 1920 was about 6,000 pounds of milk, in 1926 about 7,500 pounds, or an average annual increase of about 200 pounds as the result of improved practices growing out of testing, such as elimination of unprofitable producers, selective breeding, and scientific feeding of the profitable cows in the herd. If only half as much gain could be made in herds generally, the increased milk supply from the present number of cows would provide for 80,000,000 more people in 1966.

Included in the report are summaries of the achievements of the various branches of the bureau including the research laboratory, the breeding investigation, market-milk, and dairy introduction projects; and result of the branch experiment stations of the bureau.

The work on dairy products has included experiments on basic viscosity of ice cream, use of pure cultures in making cheese, and methods of making dairy by-products. An experiment of

wide interest is the determination of the effect of storage of skim-milk powder on its ability to improve a loaf of bread. Some of the preliminary results on the effect of high temperatures on the baking quality of milk powders have been confirmed.

Market-milk investigations have been made concerning the processes in city milk plants with a view to evolving improved methods. Among other activities a service for dairy farmers desirous of using effective and economical sterilizers for dairy utensils has been developed. "The bureau," the report says, "is now in a position to furnish dairy farmers with blue prints for the construction of the particular type of sterilizer which will meet their special needs and which can be constructed at a minimum cost."

The breeding investigations have included, among others, experiments in the feeding of sprouted oats to stimulate the fertility of breeding animals.

Results of experiments in grading up a dairy herd by the use of purebred sires are reported from the Ardmore experimental station in South Dakota. The foundation herd of native cows had an annual average production of 202 pounds of butterfat and an average lactation period of 238 days. Their daughters, sired by a purebred Holstein bull; produced on the average 246 pounds of butterfat in a lactation period of 272 days, and the corresponding figures for the granddaughters were 315 pounds of butterfat in 326 days of lactation.

An inbreeding experiment at the Beltsville Station has been continued and up to the present no decrease in vigor or other bad results of any kind have been found among the inbred animals.

In addition to the work with dairy-herd-improvement associations the bureau participated in campaigns which resulted in the placing of 532 purebred dairy bulls and the elimination of 396 scrub bulls.

Permanent Permits Under Federal Import Milk Act to Be Issued at Once

A staff is now being organized and equipped to enforce the Federal Import Milk Act, funds for this purpose having been made available by the passage of the Deficiency Bill on December 22, 1927, say officials of the Food, Drug and Insecticide Administration of the United States Department of Agriculture who are charged with the enforcement of the act. The department is now prepared to issue permanent permits for the importation of milk and cream as required by the act. The Federal Import Milk Act which became effective on May 15 provided for the issuance of temporary permits until provision could be made for inspections to ascertain that applicants have met the requirements of the act regarding physical examinations and tuberculosis tests of dairy herds, and the scoring of farms and shipping plants for sanitary condition. Since May 15, 1927, milk and cream have been admitted to

the United States under temporary permits.

Holders of temporary permits have been notified by the Food, Drug and Insecticide Administration that permanent permits may now be obtained and they were advised to obtain the permanent permits as soon as practicable.

"The Food, Drug and Insecticide Administration," says the notice, "is prepared to begin immediately the issuance of permanent permits for the importation of milk and cream, as required by the law. While no definite date has as yet been set for the recall of the present temporary permits, the attention of holders thereof is invited to the probability of an early cancellation of such permits. Temporary permittees should prepare at once to file their applications for permanent permits, which must be supported by evidences of tuberculosis tests, if raw milk or cream is to be

imported, and physical examinations of animals and sanitary inspections of dairy farms or milk handling plants. Such applications should be forwarded promptly to the Food, Drug and Insecticide Administration, United States Department of Agriculture, Washington, D. C. Delay in filing applications may result in such congestion as to cause interruption of shipments. This condition can be avoided if applicants will file their requests as soon as the supporting evidence can be obtained.

"The Department of Agriculture of the Dominion of Canada has announced that it is prepared to make tuberculin tests and physical examinations of animals as well as sanitary inspections of dairy farms and milk handling plants in compliance with the terms of the act. Applicants for permanent permits who desire to avail themselves of the facilities of the Canadian Government should

make arrangements without delay with the Veterinary Director General of the Canadian Department of Agriculture, Ottawa, Canada, for the various tests, examinations and inspections which they may require and for the procurement of necessary application and report forms are in possession of the Canadian authorities. Additional forms, if necessary, may be secured from the Food, Drug and Insecticide Administration, United States Department of Agriculture, Washington, D. C. This administration can not at this time undertake to make the examinations of animals or inspections of farms and plants upon which to base permanent permits. Requests for such examinations will be referred to the appropriate officials of the country where the milk or cream is produced. Later announcement will be made of the date on which all outstanding temporary permits will be canceled."

INTER-STATE MILK PRODUCERS' REVIEW

Official Organ of the
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The Inter-State Milk Producers' Association, Inc., through its official organ, THE INTER-STATE MILK PRODUCERS' REVIEW, extends to its members and to all of the readers of THE INTER-STATE MILK PRODUCERS' REVIEW, its best wishes for a Happy and Prosperous New Year.

A great measure of our success during the past year has been due to the spirit of cooperation and fair dealing evidenced by the membership on the whole, as well as on the part of the cooperating buyers of our product and it is hoped that this spirit may continue and grow, year by year, so that the continued success of the association, as well as those in the industry, with whom we are cooperating, may be assured.

At an early date the offices of the Inter-State Milk Producers Association, Inc., and the Philadelphia Inter-State Dairy Council will be moved from the Boyetown Building to the Flint Building, 219 North Broad Street, Philadelphia, Pa.

This change has been deemed necessary because the present office space has been too small for the increasing needs of both organizations. It was found impossible to secure the needed floor space in the building now occupied.

The new offices in the Flint Building are located on the Tenth Floor, and will enable us to have all the offices on one floor space. The Flint Building is located on Broad Street, between Race and Vine, two and a half blocks north of the City Hall.

Not alone Pennsylvanians but farmers from all the adjoining states should consider the possibility of visiting the annual Pennsylvania State Farm Products Show to be held in Harrisburg, Pa., January 17th, 18th, 19th and 20th, 1928.

This farm products show will, no doubt, exceed any previous exhibit, in that a greatly increased floor space has been provided.

Thirty state-wide farm organizations will hold their annual meetings in Harrisburg during the period of the show while many other formal meetings will also be held during the same time.

The Pennsylvania State Dairyman's Association will hold its annual meeting on January 18th, in the Senate Caucus Room in the State Capital. Its annual banquet will be held in the Masonic

Temple in the evening of that day. Pennsylvania Dairyman should make it a point to attend these meetings and affiliate with the association.

The various group organizations which will hold meetings during the week include Dairying, Sale and Manufacture of Dairy Products, Vegetable Growing, Swine, Sheep, Horticulture, Potato Growing, Poultry, Beekeeping, Insect Control, Marketing Developments, etc.

These various meetings are, for the most, as are also the various exhibits of the show, free and open to the public.

You should not miss the opportunity of visiting and participating in this advanced development of agriculture.

Good Sires Improve Dairy Herd Values

Dairy cattle improvement advanced rapidly during the past year, figures announced by E. B. Fitts, in charge of dairy husbandry extension work at the Pennsylvania State College, reveal. Nineteen new bull associations were organized during 1927, making the total number 63, with 820 members.

Holsteins lead with 36 associations and 131 bulls. There are 13 Guernsey groups having 45 bulls; 9 Jersey associations with 35 sires; 3 Ayrshire organizations with 12 bulls, and 2 Brown Swiss associations having 6 sires.

Butler county, with nine associations, leads all the Pennsylvania counties and most of the other states in the Union. McKean county, with seven groups, is outstanding because the four major dairy breeds, Ayrshire, Guernsey, Holstein, and Jersey, are represented. In this north tier county a campaign to replace all scrub and grade sires with sons of bull association sires and purebred cows of good production records has been started.

A summary of the herds in 36 associations covering 33 years has just been completed, according to Fitts. It shows a 44 per cent increase in purebreds, or from 1777 to 2562 animals. Grade cattle have decreased from 3811 to 2869, or 33 per cent. Of the 5431 cattle now in these 36 associations, 1949, or more than one-third, are daughters of association sires.

Owners estimate \$10 to \$25 increased value per head for grade daughters of association sires over the grade daughters of ordinary purebred bulls and \$25 to \$50 per head in the case of purebred daughters of the two types of sires.

During the year 354 daughters of association sires have been sold at \$6,000 more than would have been realized from ordinary grade of purebred stock. An additional \$30,000 has been gained in the inventory value of the association herds. The valuable influence of the improved breeding has spread also, 139 sons of association sires and good purebred cows being used in communities adjoining those having bull associations.

Keep Corn From Freezing

Is your seed corn properly cared so that it will pass through freezing weather undamaged? It is a valuable commodity on any farm this year and every ear should be saved if possible.

Put Up Some Ice

Are you planning to store a good supply of ice this winter? It will add to the comfort and convenience of the farm home and will also be an economical article where refrigeration is needed.

MARKET CONDITIONS

H. D. ALLEBACH

As we approached the holiday season we found the usual increase of surplus milk on the market. This of course is a yearly occurrence.

During the holiday period the consuming public, to a very large extent, diverts from its customary food habits and milk consumption falls off sharply as compared to other seasons. This decrease usually sets in about December 24th and continues until about the 10th of January and with the decreased buying power of labor on the whole, has been somewhat larger than usual.

This year has been no exception to the rule and we find a larger surplus on the market. Production has been maintained right up to the maximum so that the surplus must await returned public consumption to equalize market conditions. This we believe will adjust itself before the middle of January.

I wish to call to the attention of our producers, one clause in our present selling plan which reads, "any producer who has had his herd tested for tuberculosis, after January 1st, 1927 (that is the initial test) shall be paid in accordance with the shippers present basic quantity for the balance of 1927 and during the year 1928, except when the producer prefers to have his basic quantity determined in accordance with section No. 2 of the revised selling plan, which reads as follows:

No. 2. To determine "1928 Basic Quantities" to be used for payment of milk purchased during 1928, the following method shall apply, except in cases where special arrangements have already been made by individual buyers, determine the average quantity shipped by each producer during October, November and December 1927, add to this average the "1927 Basic Quantity" of each producer and divide by two the sum obtained.

It is very important that every producer who has had his initial test made in 1927 and who wishes to continue the use of his present basic quantity during 1928, must notify either the buyer of milk or the offices of the Inter-State

Milk Producers' Association, not later than January 15th, 1928.

While this notice has been previously printed in the Milk Producers' Review we feel that it is highly important and that your attention should be called to it again.

December Milk Prices

Grade B market milk, three per cent butter fat content (basic quantity average), delivered f. o. b. Philadelphia, during December is quoted at \$3.29 per hundred pounds.

The price of basic milk (basic quantity average) three per cent butterfat content, delivered at Receiving Stations in the 61-60 mile zone, during December, is quoted at \$2.71 per hundred pounds. The usual butter fat differentials and freight rate variations applying at other mileage points in the territory, are shown by quotations on page 5, of this issue of the Milk Producers' Review.

The price of Class 1 surplus milk, for December three per cent butterfat content, at all Receiving Stations, is \$2.06 per hundred pounds. For f. o. b. Philadelphia delivery the price for Class 1 surplus milk is quoted at \$2.63 per hundred pounds or 5.65 cents per quart.

December Butter Market

Trading during December has been generally satisfactory—even through the holiday period. There has been a fairly regular demand and the market has been healthy. Price changes have been few. The market opened on December first with 92 score, solid packed butter quoted at 51½ cents, New York City. This price was maintained for one week, when a ½ cent advance was made and the new price, 52 cents a pound carried on for the remainder of the month.

While there has been some importations of butter during the month, the amount has not been such as to influence market conditions.

The average price of 92 score, solid packed butter, New York City, on which the December surplus price was computed, was .5180 cents, as compared to .4933 cents for the month of November.

Cooperative Buying Groups Increase Sales And Reduce Expenses

A study of 42 cooperative purchasing associations in Pennsylvania, which did a business of \$1,794,671 in 1926, shows that these associations increased their sales 4.8 per cent during the year, in spite of lower feed prices, and at the same time slightly reduced their expenses as compared to 1925. The average expense in 1926 was 4.34 per cent of the sales while in 1925, it was 4.35 per cent of sales.

The average salary and wage expenses were slightly higher in 1926 than in the previous year, but the interest and miscellaneous expenses were lower.

The Bureau of Markets, Pennsylvania Department of Agriculture, has been making an analysis of the reports of these 42 cooperative purchasing associations for the past three years. The results are made available to the managers and directors of all these organizations to be used in promoting greater efficiency in their business.

A cow must have three quarts of water for every quart of milk she produces.

Report of the Quality Control Department, Philadelphia Inter-State Dairy Council.

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of November, 1927.

No. Inspections Made... 2,314
No. Sediment Test ... 1,141
No. Meetings Held 8
Attendance 335
No. Man Days, Fairs and Exhibits 10
No. Temp. Permits issued up to November 30th, 1927 24,306
No. Permanent Permits issued up to November 30th, 1927 10,668

During the month 90 dairies were discontinued from selling for failure to comply with the regulations—45 of which were reinstated before the month was up. To date 87,343 farm inspections have been made.

LATEST MARKET PRICES

PHILADELPHIA SELLING PLAN
The basic price quoted below for December, 1927, is to be paid by cooperating dealers on the average basic quantity established for each producer. For all milk bought in excess of the basic amount, the surplus quoted below for the month of December is to be paid. Beginning with January, 1927, the basic quantity will be established by using the higher average basic quantity established in October, November and December of either 1925 or 1926.

These quotations are based on 3% butterfat milk and a differential of 4 cents for each tenth point and 2 cents for each half tenth point up or down and are for all railroad points. (Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES
This price list is issued with the understanding it is not to be used by producers and that all buyers using it as a basis of payment to producers, shall in addition thereto make the following contributions and payments:
(1) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk purchased from any producer at price listed hereon
(2) To the Inter-State Milk Producers' Association 2c per 100 pounds (46½ quarts) of all milk bought from members of said Association.
(3) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk bought from other producers at price listed hereon.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets and for an educational campaign advertising the food value of dairy products.

BASIC PRICE		BASIC PRICE	
December		December	
F. O. B. Philadelphia		Grade B Market Milk	
GRADE B MARKET MILK		Quotations are at railroad points. Inland stations carry differentials subject to local arrangements. Prices are less freight and receiving station charges.	
Test per cent.	Per 100 lbs.	Price per qt.	Freight Rates
3.0	3.31	7.1	100 lbs.
3.1	3.33	7.2	100 lbs.
3.2	3.35	7.3	100 lbs.
3.3	3.37	7.4	100 lbs.
3.4	3.39	7.5	100 lbs.
3.5	3.41	7.6	100 lbs.
3.6	3.43	7.7	100 lbs.
3.7	3.45	7.8	100 lbs.
3.8	3.47	7.9	100 lbs.
3.9	3.49	8.0	100 lbs.
4.0	3.51	8.1	100 lbs.
4.1	3.53	8.2	100 lbs.
4.2	3.55	8.3	100 lbs.
4.3	3.57	8.4	100 lbs.
4.4	3.59	8.5	100 lbs.
4.5	3.61	8.6	100 lbs.
4.6	3.63	8.7	100 lbs.
4.7	3.65	8.8	100 lbs.
4.8	3.67	8.9	100 lbs.
4.9	3.69	9.0	100 lbs.
5.0	3.71	9.1	100 lbs.
5.1	3.73	9.2	100 lbs.
5.2	3.75	9.3	100 lbs.
5.3	3.77	9.4	100 lbs.
5.4	3.79	9.5	100 lbs.
5.5	3.81	9.6	100 lbs.
5.6	3.83	9.7	100 lbs.
5.7	3.85	9.8	100 lbs.
5.8	3.87	9.9	100 lbs.
5.9	3.89	10.0	100 lbs.
6.0	3.91	10.1	100 lbs.
6.1	3.93	10.2	100 lbs.
6.2	3.95	10.3	100 lbs.
6.3	3.97	10.4	100 lbs.
6.4	3.99	10.5	100 lbs.
6.5	4.01	10.6	100 lbs.
6.6	4.03	10.7	100 lbs.
6.7	4.05	10.8	100 lbs.
6.8	4.07	10.9	100 lbs.
6.9	4.09	11.0	100 lbs.
7.0	4.11	11.1	100 lbs.

Test per cent.	Per 100 lbs.	Price per qt.	Freight Rates
3.0	3.31	7.1	100 lbs.
3.1	3.33	7.2	100 lbs.
3.2	3.35	7.3	100 lbs.
3.3	3.37	7.4	100 lbs.
3.4	3.39	7.5	100 lbs.
3.5	3.41	7.6	100 lbs.
3.6	3.43	7.7	100 lbs.
3.7	3.45	7.8	100 lbs.
3.8	3.47	7.9	100 lbs.
3.9	3.49	8.0	100 lbs.
4.0	3.51	8.1	100 lbs.
4.1	3.53	8.2	100 lbs.
4.2	3.55	8.3	100 lbs.
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4.6	3.63	8.7	100 lbs.
4.7	3.65	8.8	100 lbs.
4.8	3.67	8.9	100 lbs.
4.9	3.69	9.0	100 lbs.
5.0	3.71	9.1	100 lbs.
5.1	3.73	9.2	100 lbs.
5.2	3.75	9.3	100 lbs.
5.3	3.77	9.4	100 lbs.
5.4	3.79	9.5	100 lbs.
5.5	3.81	9.6	100 lbs.
5.6	3.83	9.7	100 lbs.
5.7	3.85	9.8	100 lbs.
5.8	3.87	9.9	100 lbs.
5.9	3.89	10.0	100 lbs.
6.0	3.91	10.1	100 lbs.
6.1	3.93	10.2	100 lbs.
6.2	3.95	10.3	100 lbs.
6.3	3.97	10.4	100 lbs.
6.4	3.99	10.5	100 lbs.
6.5	4.01	10.6	100 lbs.
6.6	4.03	10.7	100 lbs.
6.7	4.05	10.8	100 lbs.
6.8	4.07	10.9	100 lbs.
6.9	4.09	11.0	100 lbs.
7.0	4.11	11.1	100 lbs.

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4.9	3.69	9.0	100 lbs.
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5.1	3.73	9.2	100 lbs.
5.2	3.75	9.3	100 lbs.
5.3	3.77	9.4	100 lbs.
5.4	3.79	9.5	100 lbs.
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5.9	3.89	10.0	100 lbs.
6.0	3.91	10.1	100 lbs.
6.1	3.93	10.2	100 lbs.
6.2	3.95	10.3	100 lbs.
6.3	3.97	10.4	100 lbs.
6.4	3.99	10.5	100 lbs.
6.5	4.01	10.6	100 lbs.
6.6	4.03	10.7	100 lbs.
6.7	4.05	10.8	100 lbs.
6.8	4.07	10.9	100 lbs.
6.9	4.09	11.0	100 lbs.
7.0	4.11	11.1	100 lbs.

4.65	3.95	8.5	DECEMBER SURPLUS PRICES At All Receiving Stations Class I	Test per 100 lbs.
4.7	3.97	8.55		
4.75	3.99	8.6		
4.8	4.01	8.65		
4.85	4.03	8.65		
4.9	4.05	8.7		
4.95	4.07	8.75		
5.	4.09	8.8		
When milk is not tested, the price f. o. b.				
Philadelphia is 8 cents per quart.				
		3.05	2.08	
		3.1	2.10	



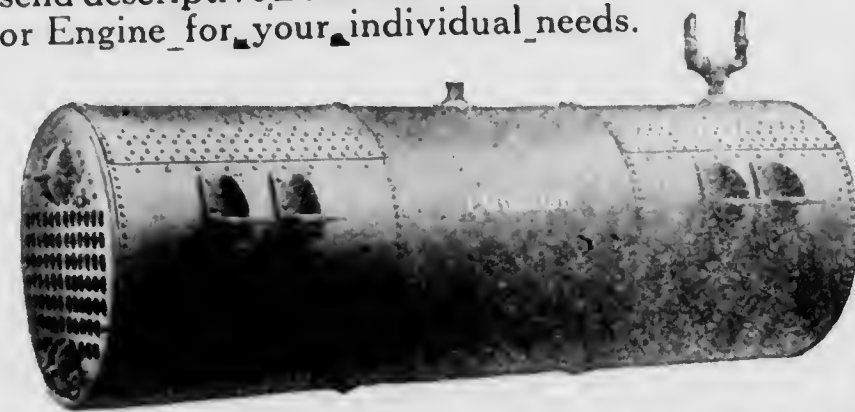
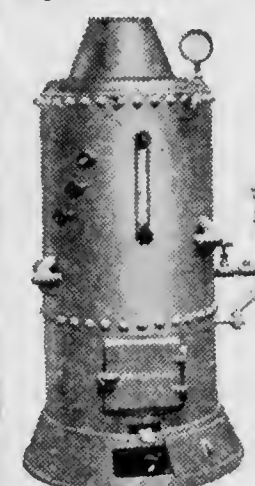
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Food Shortage Unlikely In United States, Says Farm Economist

There is small likelihood of a food shortage in the United States for the next seventy-five years, declared Dr. O. E. Baker of the United States Department of Agriculture, addressing the American Farm Economic Association at Washington, December 29.

"Looking forward a century, when our

population appears likely to have become stationary at 200,000,000 persons," Doctor Baker said, "all the evidence available suggests that agricultural production can keep pace with the increase of people without any greater changes in the character of the food supply than those which have occurred during the past quarter century."

Discussing the more immediate outlook, Doctor Baker declared that "the substitution of mechanical for animal power on farms must continue for several years at least," and that this continued mechanization of agriculture will cause production to increase as rapidly as population during the next decade.

"Recent cost of production surveys indicate that somewhat higher acre-yields of crops would be profitable even at present prices. The more widespread use of highly efficient farm animals probably would be even more profitable. If only 50 per cent more feed is consumed by cows giving 10,000 pounds of milk a year than by those giving 5,000 pounds, the possibility of a large increase in agricultural production without any increase in crop acreage or yields per acre becomes apparent."

Doctor Baker pointed out, however, that "confidence in the capacity of American agriculture to increase the food supply in about its present proportions as rapidly as population increases during the next century assumes that the advance of scientific knowledge, in the experiment stations and elsewhere, and the spirit of progress among farmers will continue. Should these bases of our civilization be impaired, agricultural progress might cease and population proliferate, as it has in the Orient, until poverty and ignorance overwhelmed our nation also."



Will be on exhibit at the State Farm Products Show at Harrisburg, January 17th to 21st.

Cools Milk Below 50°

"Quickly—Efficiently—Economically"

Eastern Sales Company

WEST CHESTER, PA.

Fifty Associations

Test 17,401 Cows

Fifty associations tested 17,401 cows in October, the Pennsylvania State College dairy extension service reports. One hundred forty-eight "boarder" cows were sold when testing revealed they were unprofitable in milk paid operations.

Forty pounds or more of butterfat were produced by 1527 of the tested animals, and 1947 passed the 1000-pound mark in milk production. Of the 40-pound cows 454 produced more than fifty pounds of butterfat, and 1001 of the 1000-pound milkers gave more than twelve hundred pounds of milk.

Central Pennsylvania Guernsey Breeders' Association, which has two testers, tested the largest number of cows, 715. The Laurel Hill group of Bradford county was first in the number of 40-pound cows with 79. Carbon-Lehigh dairymen led in 1000-pound milkers with 112. This organization has maintained a consistent record of leadership during the year, being first nearly every month.

Bell Farm, of the Allegheny association had the first and third highest milkers, registered Holsteins with 2970 and 2437 pounds respectively. J. H. Clarke, of the Juniata association had the second best milker, a grade Holstein, with a production of 2678 pounds.

A registered Holstein owned by J. R. Doane, of the Laurel Hill group, led butterfat production with 87.3 pounds. J. H. Clarke's grade Holstein was second with 87.1 pounds, and the Bell Farm had the third best, a registered Holstein with 86.1 pounds of fat.

Highest 10-cow averages in butterfat were as follows: Allegheny, 71.6; Laurel Hill, 68, and Wayne, 64.1 pounds.

Skim Milk in Dry Form Has Various Uses

Comparatively small quantities of skim milk are being manufactured into skim-milk powder. As yet the market for dry skim milk takes little more than 2 per cent of the dried powder that might be made from the milk resulting from buttermaking. Ten pounds of milk make nearly one pound of powder, which is an excellent food material composed of 38 per cent of proteins, 50 per cent of lactose or milk sugar, and 8 per cent of salts which are a valuable addition of the mineral part of the diet.

Recent experiments conducted by the United States Department of Agriculture have demonstrated an improved method of drying the milk. This results in a product highly superior for bread baking purposes. In baking, the dried milk is a particularly desirable addition to the loaf. When used with good flour it is possible to get a loaf 10 per cent larger and about 4 per cent heavier than without it. An even more desirable advantage is the fact that the milk adds greatly to the nutritive value of the bread as well as to its flavor and physical characteristics. For bakers the added cost of the milk is balanced by the increased number of loaves which can be made from a barrel of flour.

A Real Hardship

Scotchman—"What's the idea of raising the price of gasoline all the time?" Garage Man—"What do you care? You haven't got a car."

Scotchman—"No, but I got a cigar lighter."—Southern Calif. Wampus.

Four billion pounds more milk was produced in the United States during 1926 than in 1925.

What the Bureau of Agricultural Economics is Doing for the Dairy Industry

Extracts from an Address by Lloyd S. Tenny, Chief of the Bureau of Agricultural Economics, at the Annual Meeting of the Inter-State Milk Producers' Association, Philadelphia, November 28, 1927.

Agriculture is today America's most important industry. The gross value of farm production in 1926 was estimated at 12 billion, 985 million dollars.

In studying the figures on agricultural production we find that the value of dairy products in 1926 equaled 2 billion, 932 million dollars, which is 40.3 per cent of the total value of all animal products, and nearly 23 per cent of the total value of all farm products.

It is readily apparent that the dairy industry is increasing in importance and is deserving of more and more consideration because it is the largest single industry in the field of agriculture.

This is further evident when we consider that 22,148,000 cows on farms on January 1, 1926, produced milk and dairy products that year which had a value of only 3.7% less than all livestock raised, a larger value than the cotton crop raised by 128 per cent, a larger value than the combined fruit and vegetable crop; raised by 65.5 per cent, and that the total value of all cereal crops raised exceeded the value of the product of this industry by less than one billion dollars.

These figures are startling. They clearly indicate the rising importance of the dairy industry and the increasing importance of this industry's receiving a larger consideration by all agencies, including government agencies in the future than it has received in the past.

In any industry it is but logical for various commodity or business units of the industry to develop. So in the dairy industry we have the units of production, or dairy farming phase, the butter, cheese, condensed milk, dry milk, ice cream, etc., each of which represents a different type of manufacturing process resulting in different products which are subject to different economic conditions and different supply and demand situations. Transportation, storage, and distribution each contribute to the sum total of problems which require economic research study and investigation.

Studies completed by the Bureau of Agricultural Economics thus far show that an increase of ten per cent in milk prices has tended to cause about an 8 per cent increase in milk production within a year or two following, apparently due to farmers increasing the number of cows in their herd either by the purchase of new cows or the retention of old cows while younger animals were maturing. From two-thirds to three-fourths of the changes in milk production were due solely to such economic factors in the price of milk and price of feeds.

In some cases it would have been possible to have estimated nearly a year in advance with a fairly high degree of accuracy the changes in milk production that would take place from the change in the price level of the product.

As these studies are more fully worked out and the conclusions more accurately determined, they should prove of great value in arriving at prices which will give the best adjustment to existing economic conditions and so put price policies on a sound scientific basis.

A Report of Some Experiments in Milk Production T. E. WOODWARD

(Continued from page 2)

more than the cost of labor for the extra milking and the additional 3 lbs. grain which must be supplied for the extra 6 pounds milk produced in order to make the 3 time a day milking profitable. In general I think I would not milk cows 3 times a day if I had to do all the work myself, but if I had the necessary labor and equipment and my cows were high enough producers I would probably milk them 3 times a day at least during the winter months.

Now just a few words about feeding. There are several axioms in the feeding of cows which we should keep in mind. One is that we can not get any more out of a cow than we put into her. I heard a prominent man once say that a certain cow gave 75 lbs. milk on grass alone. Perhaps she did but if so, she was robbing her body to make milk and thereby losing body weight because we know she could not eat grass enough for any such quantity. Nor can we get more protein or lime in the milk than the cow assimilates from her food.

Another is that when cows are fed more than is necessary to support their milk flow and maintain their bodies they will lay on fat, and while they will give a little more milk, the food cost will generally more than equal what the extra milk will sell for. We have found that giving cows 2 to 4 lbs. more grain than they require and estimating the grain at 2c a pound, has made the extra milk produced cost from 40 to 80c a gallon. On the other hand when a cow does not get enough feed she becomes thin and production declines. For this reason the condition of the cows is a good indication as to whether they are receiving enough feed or not.

Another axiom is that cows differ but slightly in their efficiency of digestion. For example if you have 2 cows of the same size giving the same quantity of like quality, one cow will require the same amount of feed as the other. This fact along with the standards that have been prepared make it possible for a person to estimate pretty closely how much feed each cow in the herd should receive without his ever seeing the cows.

Another matter which should be an axiom is that the fullest possible use should be made of home grown roughage. A cow's digestive system is arranged to take care of large quantities of roughage. Let's not feed her as if she were a pig. The roughage should be home grown because it is cheaper than that which is bought, or if not, there is something wrong with the cropping system which should be corrected at once.

Now as to feeding cows when on pasture there has always been considerable difference in the directions which have been advised. Our experience with Jersey and Holstein cows is that they will eat only enough pasture, even when it is good, to support a milk flow of 18 or 20 pounds. This means that all milk produced over 20 lbs. should be taken care of by other feed. To do this about 1 pound of grain for each 2 pounds of milk above 20 should be supplied. A cow giving 30 pounds milk would receive 5 pounds grain a day while one giving 40 lbs. milk would get 10 pounds. These directions apply to good pasture. As the grazing becomes short, still heavier feeding must be resorted to if the cows are to be kept from getting thin and the milk flow falling off too fast. The condition of the cows as regards flesh is

about as good a guide as any to determine the amount of feed to supply. If the cows seem to be getting too thin give more feed; if getting fat reduce the amount. I might say in this connection that it is pretty hard to prevent some loss of weight when the weather gets hot, the flies bad and the pastures short.

Feeding cows in winter is a simpler matter because the quantity of feed which a cow eats is not subject to so much guess work. I would aim to feed each cow about 8 lbs. of silage per day for each 100 lbs. which she weighs, for example a cow weighing 800 lbs. would receive 24 lbs. silage and one weighing 1200 lbs., 36 lbs. silage. I would then feed each cow all the legume hay she would eat twice a day. Our records show that the nutrients in silage are the cheapest we can get. The legume hay is necessary in order to supply the mineral matter and the protein of the milk.

As to the grain to be given we are inclined to believe that the old rule of 1 lb. grain to 3 lbs. milk is fairly satisfactory but hardly as accurate as it should be. We find cows will eat enough of the roughage, if the hay is good quality, to maintain their bodies and produce some milk. Jerseys will eat enough to produce 10 lbs. milk without grain, Holsteins will eat enough to produce about 17 lbs. milk. Now if the grain mixture contains about one-half of such bulky feeds as ground oats or wheat bran, there will be required about 1 lb. of grain for each 1.7 lbs. milk over 10 lbs. produced by Jerseys; and about 1 lb. grain for each 2.4 lbs. milk over 17 lbs. produced by Holsteins. This means that a Jersey giving 20 lbs. milk would receive 6 lbs. grain, one giving 30 lbs. milk, 12 lbs. grain, one giving 40 lbs. milk, 18 lbs. grain, one giving 50 lbs., 24 lbs. grain. However, I would not advise giving any Jersey more than about 16 lbs. of grain. If she requires more than this the difference could be made up more safely with dried beet pulp. According to this method, Holsteins yielding 20 lbs. milk would receive only 2 lbs. grain, 30 lbs. milk, 6 lbs. grain, 40 lbs. milk, 10 lbs. grain, 50 lbs. milk, 14 lbs. grain, 60 lbs. milk, 18 lbs. grain, 70 lbs. milk 22 lbs. grain and I don't think I would give a Holstein more than 20 lbs. grain a day, any amount over this to be made up with dried beet pulp. We find that these directions work very well when a good quality of alfalfa hay is used. Poorer hay would of course necessitate heavier feeding of grain.

Now I am afraid that I have covered too great a variety of subjects for the most effective talk. I could have told you just how we went about conducting the experiments, the results of which I have given, and thus used up my allotted time but I thought you would be more interested in getting a condensed statement of the results than you would be in the matter of experimental procedure. However, if I were to stress one point more than another it would be this matter of providing the cows with an abundance of good home grown feed. It seems to me that there is no way by which the profits from the average dairy may be increased so quickly, so greatly and so surely than by greater attention to the matter of feeding particularly the feeding of those materials grown on the farm.

*An address by Mr. Woodward at the Annual Meeting of the Inter-State Milk Producers Ass'n

How about your cows at calving time?

The calving period is a critical time, especially with cows that are above the average in milk production. A retained afterbirth will prevent the cow from getting into her stride of normal milk flow from six weeks to two months. Bad cases of caked udder, when the cow must not be fed grain, also means a loss of a month or more of heavy milk flow, if it does not result in a lost quarter.

If the cow approaches parturition constipated, hide-bound and generally out of condition—look out for trouble—it is almost sure to come.

Trouble at calving time is due in most cases to the use of a poor grain ration. Such rations are usually mixtures loaded with some single ingredient because it is cheap, but they do not meet the requirements of a high-class cow.

UNION GRAINS is the ideal ration to fit a cow for successful calving. It is a scientific blend of ten different ingredients, each one contributing a definite nutritive value to the ration. UNION GRAINS has exactly the proper kinds and amounts of protein, carbohydrates, fat and minerals. Its vitamin content is complete. Such a perfect balance protects the delicately adjusted mammary and reproductive systems. UNION GRAINS is slightly laxative in its effect. This promotes perfect elimination



through bowels and kidneys. The skin is kept loose and pliable so that the pores also function perfectly.

UNION GRAINS is the dairyman's standby. It reduces trouble incident to calving time to the minimum. No valuable time is lost in getting the cow started on a new lactation period when UNION GRAINS is fed. Dairymen believe in UNION GRAINS because they find an extra profit in the milk check every month. Try it on your own milkers. Your dealer sells UNION GRAINS.

UBIKO Dairy Service Bulletin Free

We will send our new bi-monthly publication, the "UBIKO Dairy Service Bulletin," regularly to dairymen who ask for it. Each issue will contain a helpful article on some phase of dairymen's work, written by an authority—also other information regarding feeding, health, etc.

THE UBIKO MILLING COMPANY, Cincinnati, Ohio Dept. L15

Makers of UBIKO World Record Feeds

UBIKO 32 Ration (32% Protein). For mixing with home-grown grains	UBIKO Horse Feed
UBIKO Special Dairy Ration, 20% Protein—sweetened	UBIKO World Record Buttermilk Egg Mash
UBIKO Calf Meal	UBIKO Buttermilk Starting Mash with Cod Liver Oil
UBIKO Pig and Hog Ration	UBIKO Fattening Mash
	UBIKO Scratch Feed
	UBIKO All-Mash Rations

And other UBIKO Rations



UNION GRAINS

THE FIRST DAIRY FEED MADE

A Pure Milk Supply*

The fiscal year used by dairymen came to a close on the last day of October and the Department of Health asserts that no case of communicable disease in Philadelphia could be traced to the milk supply in that year. Absolute cleanliness and thorough pasteurization seem to have been maintained.

Some 43,000 farmers supplied the 331,880,642 quarts of milk for the Philadelphia territory in that year, 38,595,000 more quarts than the year before, yet in all of the many ramifications of this extensive industry, germ contamination was unknown.

In this same year Montreal had a typhoid fever epidemic which caused 2,603 cases in eight weeks and it was traced by the U. S. Health authorities to one dairy and to one man who was a "typhoid carrier." Laxity on the part

of the officials caused a recurrence of the disease a few weeks later, and 770 cases with twenty-nine deaths occurred in one week as a result of the contamination in this one dairy. The plague scourged the city from the early part of March to the end of July.

Such is the penalty paid by a community when the milk supply is not guarded absolutely by the health authorities, and the dairymen themselves. In Philadelphia, not only the health authorities, but the distributors and the Producers' Association will penalize the dairymen who does not maintain an absolute standard of cleanliness and purity.

Milk is an article of universal consumption in one form or another, and the protection of the supply is one of the prime safeguards of the city's health.

*Reprinted from a recent editorial in the "Philadelphia Evening Bulletin".

GIBRALTAR WASH TANKS

The up-to-the-minute dairyman does not save money by buying cheap, low-grade cows and bulls—he is convinced that by getting only the best he is practicing real economy. Unfortunately, when it comes to equipment, he often forgets that principle and thinks he is saving money by purchasing poor-grade, inexpensive material.

That is particularly true of metal wash tanks. A good metal tank can not be built cheaply. You are only fooling yourself when you think you are buying a good tank at a cheap price, and surely an article that is in such constant use as a wash tank should be the best obtainable—which is the GIBRALTAR.

BUY THE BEST — and SAVE MONEY

W. HOWLETT CO., Inc.

Central City Office 1529 Land Title Building
PHILADELPHIA, PA.

Phone Rittenhouse 7232

Strains 100% Clean or your Money Back

Dr. Clark's Purity Milk Strainer is the only strainer on the market guaranteed to get all the dirt, dust and sediment or your money back.

Because it is the ONE strainer that strains absolutely clean is the reason why it is used and recommended by practically all the large dairies, creameries, condensaries, thousands of farmers.

WHY TAKE CHANCES
when you can use Dr. Clark's Purity Strainer with its sterilized cotton disc and KNOW that your milk will grade 100% clean?

Dr. Clark's Purity Strainers are simple to use and easy to clean—save time—bring you higher prices for your milk. Also best for straining maple syrup, vinegar, cider and home beverages.

Sold by good dealers everywhere. Two sizes, 10 quart and 16 quart. Write for descriptive folder and our 10 Day Trial Test Offer. If your dealer can't supply you, we will.

DR. CLARK'S
Purity
MILK STRAINER

**10
Day Trial Test**

Write at once for our 10 Day Trial Test Offer. Find out how you can test the PURITY Strainer and get your money back if it doesn't remove every particle of dirt from your milk. Get all the facts. A postal or letter brings you complete information "10 Day Trial Test Offer" by return mail.

PURITY STAMPING CO.
Battle Creek, Mich.
Dept. F2

Has Your Mailing Address Been Changed?

IF it has—and you have not notified the Milk Producers' Review, copies of the paper may be delayed or often entirely missed.

Inform this office at once of any change in your mailing address—give both old and new addresses and mail direct to the Milk Producers' Review, Philadelphia.

The State Board of Health and its Control of the Milk Supply *

THEODORE APPEL, Secretary of Health Commonwealth of Pennsylvania

The question of the relation of the State through the Department of Health to the regulation and control of the milk situation is extremely complex. Many factors are involved, not only from the viewpoint of the public or consumer, but also from the producer and the distributor. In addition the general policy of the State itself as regards regulation is by no means fixed and the requirements of the large city and the small rural community cannot be stated in the same terms. And yet in spite of its complexity, there are certain basic facts on which all the interests can agree.

In the first place, from the standpoint of health we all recognize the prime importance of milk as an article of food, and that it is to the advantage of all concerned that its general use should be definitely increased. We know also that if the milk is properly handled on the farm, in the milk plant, or by the final distributor, its use is fraught with danger to the public, for unfortunately milk forms a splendid medium for the development of disease producing organisms of various kinds if once contaminated. It is not necessary here to go into detail. Milk borne outbreaks of typhoid, of epidemic sore throat, and possibly of diphtheria are only too common, while the menace of tuberculosis is definitely present. It is evident then in the second place, that definite precautions must be preserved to the end that the milk be not contaminated and that it reach the consumer in a clean, pure, uncontaminated condition. Finally, I believe that we will all agree that such regulations or rather requirements conserving the quality and healthfulness of the milk produced must be practical in that they accomplish their purpose without imposing too high an overhead on the producer, which in turn would so raise the price to the ultimate consumer as to defeat our first object of increasing the use of milk as an important article of food. These are simple axiomatic facts, but they underlie any definite regulatory policy that either state or municipality should erect.

We have today in the laws of the Commonwealth, in the regulations of the several Departments of the State government and in the ordinances of various municipalities, definite attempts to formulate a standard of production and of distribution, but these are by no means uniform and are often not comprehensive. They have been enacted from time to time but not codified and while in Pennsylvania we feel that great progress has been made and the people in many parts are well safeguarded, we are still far from the final solution.

Let us set out the requisites of proper production and distribution, and on these I think again we will all agree. In the first place, the cattle themselves should be healthy and free from tuberculosis or other disease transmissible through milk. The dairies should be clean and the milk properly handled by persons also free from transmissible disease. The cans and bottles must be above suspicion and in order to fully insure safety, proper pasteurization should be carried out in all cases where there is any possible suspicion of contamination. Of course the ideal solution would be pure, uncontaminated milk from a healthy cow, bottled and handled under scrupulous precautions,

but we all know that is impossible and must rely on effective pasteurization as the necessary safeguard, and it must be remembered that perfectly pasteurized milk can be dangerously contaminated later by careless handling. It seems to me that these axiomatic facts make necessary the formulation of some definite regulations and control over the milk supply of the public.

Let us now analyze the machinery at the disposal of the public as represented by the State. It is a rather curious mixture of central and local control, and yet I believe that same curious mixture gives us the only possible way to a satisfactory solution of the problem, for no State-wide law or regulation would be satisfactory to Philadelphia, Pittsburgh, and Scranton and to the thinly settled sections of some of the rural counties. Pennsylvania in matters of health does not by its legislature recognize the county unit. The State Department has definite control and responsibility of second class townships. Cities of the first, second, and third class, boroughs and townships of the first class, have or are supposed to have local Health Departments or Boards of Health. These local authorities control the situation by ordinances; which may exceed the State standard, but cannot be lower. The weak point in the chain is the small borough, and as a matter of fact the health administration of some 110 of these 938 boroughs has either voluntarily or by default been turned over to the State.

It is well also to consider the distribution of population. Approximately two and a half millions of our people live in cities of the first and second class. Another million and a half in third class cities. Two and a quarter millions live in boroughs and two and a half in first and second class townships. Of the 1035 municipalities, 81.2% have populations of less than 5000, while 440 or over a third, have less than 1000 each. The 1508 second class townships under State control have nearly a million more than all the cities of the third class. These figures not only indicate the wide variance of the machinery available for regulation, but also emphasize the impossibility of a rigid State-wide standard.

Let us then take up the present situation and see what has been accomplished. The larger cities have fairly well standardized milk regulations which as a rule safeguard the consumer. Of the 110 boroughs taken over by the State and in the second class townships, some progress has been made but the condition is far from satisfactory. A number of small municipalities are supervising their supplies under the Advisory Health Board's regulations of 1923 and a few are achieving creditable results. Over a hundred cities, boroughs and townships of the first class have proper ordinances, some enforcements through the services of trained inspectors are giving almost ideal results. In other cases communities have joined together in milk districts and under reasonable regulations, employing trained inspectors and laboratory technicians, are doing good work, but of the over a thousand municipalities practically only 10% are properly functioning.

What then is the duty of the State? Is it possible to develop a minimum

(Continued on page 12)

Field and Test Department Report

F. M. TWINING

(Continued from page 7)

Many dealers have made changes in their methods of operation at our suggestion. One company went to considerable expense to install a brine cooling system in order to keep their composite samples in a better condition. Several old weigh scales that had become somewhat sluggish with rust have been taken out and replaced during the year.

Herd Testing

In 1924 we started making tests for members who wished to find out the percentage butterfat average of their individual cows, and who were willing to take their own samples under our direction.

The popularity of this service is shown by the increasing number of requests for it each year. Last year we reported having tested 175 individual herds. This year in ten months, between June 1st to Nov. 1st, we have tested 337 herds, having a total of 3,378 cows. Tabulations made from typical herd test reports are rather interesting although probably not of sufficient scope to draw any very definite conclusions.

In one herd the highest test was 6%, and the lowest was 2.70%. The average test of the 25 herds tabulated was 3.82%. The average test of the 25 lowest percent cows (one from each herd) was 3.11%. The average test of the 25 cows (one from each herd) giving the greatest number of lbs. of milk was 3.68%, and the average test of the 25 cows (one from each herd) giving the highest total lbs. of fat was 3.98%.

Herd Improvement Associations

Probably the greatest amount of good our herd testing work has done has been to show the need of more work in our territory along the lines of herd improvement. Wherever possible we are encouraging the formation of Cow Testing Associations under the direction of the State Colleges and County Agents.

We have a few sections in our territory wherein for various reasons it has been found very difficult to find just the right number of producers necessary, or, to find just the right man to operate a regular Cow Testing Association. In three such sections, one in Pennsylvania, one in Delaware, and one in Maryland, we have, with the help of the Local County Agents, and the men of the Quality Control Department of the Philadelphia Inter-State Dairy Council, formed special Herd Improvement Asso-

ciations which are each month checking on the production and feed cost of approximately 900 cows belonging to 80 different dairymen. The cost of this work to the producer is very little, and the advantages are very well recognized.

Personnel

We have made only one change in personnel in the department during the year. The nine men have been employed for an average of over 3½ years, so that practically all have had enough experience to take care of most problems that arise within their respective territories, and to attend meetings of locals to relieve as much as possible, the constant demands upon our officers. The number of times that our men have attended meetings was 173.

At a few of the recent local meetings we have had complaints of unsatisfactory conditions that existed several months previous, and which were never called to our attention. It is impossible for us to be in constant touch with every section of our territory. To be of the greatest service to our members, it is necessary that our members themselves notify the office immediately of unsatisfactory conditions which come to their attention.

Winter Plans

During the coming winter we are planning, in addition to our regular duties, to hold monthly conferences in order to study various surveys that have been made affecting agricultural marketing.

We shall consult with representatives of the Wharton School, of the University of Pennsylvania, the Agricultural departments of States in which we operate, the State Colleges, and the Bureau of Agricultural Economics of the United States Department of Agriculture.

We, of the department greatly appreciate the help and cooperation we have had from the Officers and members, and we welcome and invite suggestions as to how we may improve upon, or change our work in order to better serve the needs of the entire membership of the Association. At this time we do not have any changes in our type of work under consideration, and unless some new need arises, we shall probably pursue our present policy throughout 1928.

*Presented at the Annual Meeting of the Inter-State Milk Producers Association.

Find Medium Maturing Soybeans Best for Hay

Increasing interest in the growing of soybeans is being expressed by Pennsylvania farmers. H. B. Musser, extension agronomist of the Pennsylvania State College, reports. To meet the demands for information about the right varieties for different purposes demonstrations are being run in the state.

One of these, on the farm of Mrs. Rose Murren, in Adams county, which has just been harvested sheds light on the quantities of green weight per acre to be expected from the different varieties commonly grown in Pennsylvania.

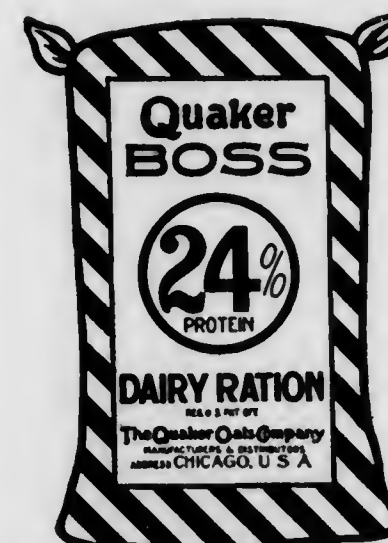
In order of the time of maturity, from late to early, the yields by green weight were: Mammoth Yellow, 21,100 pounds; Peking, 26,800; Wilson, 26,200; Virginia 80,200; Manchu, 26,800; Black

Hilum Manchu, 24,200, and Black Eye-brow 21,100 pounds. Air-dry hay would amount to about one-fourth these weights.

Extremely late varieties did not make the weight desired and neither did the early ones, Musser points out. Any of the varieties between these extremes are felt to be satisfactory as hay, soiling, or green manure crops for central and southern Pennsylvania conditions, although even the Peking would be a little late as a hay crop.

When maturity of the beans is taken into consideration, the demonstration showed that the Wilson and Virginia varieties were in the best stage to cut for good quality hay the first week in September.

Here's the Feed That Builds Milk Profits!



Contains molasses in dried form — and just the right minerals. Send for your free copy of *The Dairy Herd*

If you want to know how really profitable a ready-mixed grain ration can be, just make a fair test of Quaker Boss. This is a highly efficient 24% protein ration, scientifically mixed from fresh, select ingredients to give you in ready, economical form the things your cows require to do their very best. An ideal supplement for your own roughage, rich in the minerals necessary for steady production, and it's all feed — every ounce of it. Put away your scoop shovel; see the Quaker Dealer near you and learn how easily you can put your herd on a real money-making basis.

Quaker Sugared Schumacher — the ideal carbohydrate feed

Just the feed for combining with Quaker (16%), or Quaker Big Q (20%), or Quaker Boss (24%), or any high protein concentrate. Sugared Schumacher is a choice feed for young or dry stock; and a splendid fattening ration for steers, lambs and swine.

Made by

The Quaker Oats Company

CHICAGO, U. S. A.

Manufacturers of a complete line of live stock and poultry feeds — look for the striped sacks

New Year Resolutions

RESOLVED—that I will read the advertisements in the Milk Producers' Review each month and when writing for information and prices I will not fail to inform the advertisers that I read the ad in the Milk Producers' Review.



How Standing Well Depends on Eating Well

Looking well in our clothes depends not only upon the right bearing, or correct posture, but also upon our reflecting general good health. Aside from the attractive, pleasant appearance of the healthy individual, there is a close tie-up between what we eat and how we stand. The person whose general health is run down as a result of eating the wrong things or even the right things at the wrong times will be in no physical condition to assume the perfect posture—head up and chin in—which is so closely tied up with our vitality for unless we feel one hundred per cent we will not be inclined to carry ourselves correctly.

There are various things which contribute to the perfect circle of good nutrition which most of us would not at first be inclined to connect with this subject. For instance, plentiful sunshine and fresh air is essential to good nutrition because the important vitamin D is the sunshine vitamin. Our bodies need sunshine to help our foods manufacture the right growing materials just as the sunshine helps plants make green chlorophyll. Exercise and play help build good nutrition because we build up healthy appetites through our muscle use and outdoor recreation.

Proper mental attitude is part of the perfect circle of good nutrition because we need to be cheerful when we eat for our digestion to function properly.

Adequate sleep and rest are also part of good nutrition because an over-tired person never digests food as well as one who rested half an hour before eating.

Proper elimination, or the removal of the waste from our body, is necessary to keep all the digestive tract in good working order.

Correct eating habits are necessary for good nutrition because unless we chew our food thoroughly and eat regularly we are unfair to our digestive organs.

Even physical examinations, because they mean correction of defects, are tied up with good nutrition. Through these we learn to know when we need to go to the dentist, or when some poison in our body is counter-acting all the good influence of our food.

Sufficient food in proper balance is of course the most closely related to good nutrition. What are sufficient foods and what is the proper balance? To build up the vitality that makes possible the positive attitude toward life, verified in good posture, we need first of all a quart of milk a day; leafy vegetables are needed because they are particularly full of vitamins; whole grain cereals in bread are muscle builders that give us strength for an erect posture; and the natural sugars found in fruits which help furnish the energy to keep us full of pep, are necessary. If we want to stand right and look right it is quite clear that we must eat right.

Just plain soap and water are among the best aids to health.

Helpful Material on Posture

Posture material which will not only interest teachers but mothers and folks in general who have despaired of any effect from the oft-repeated "straighten up" may be secured from a number of sources. Especially helpful will be the films, posters, and literature on this subject from the U. S. Childrens Bureau, Washington, D. C. the Posture League of New York, and the National Child Welfare Association, 70 Fifth Ave., New York City.



A New Way to Say "Straighten Up"

Good Posture is an asset
Which very few possess;
Sad to relate, the favored ones
Seem to be growing less.

We see the folks around us
All slumped down in a heap,—
And the way that people navigate
Is enough to make you weep!

Some elevate their shoulders,
Some hollow in their backs,
Some stiffen up their muscles,
And some just plain relax.

The one who walks with grace and poise
Is a spectacle so rare
That even down on gay Broadway
The people turn and stare.

If you would cut a figure
In business, sport or school,

Wanted: Your Suggestions and Recipes

This time of year it is hard to supply the family with enough green vegetables unless you are fortunate in having an unusually well stocked preserve closet or vegetable cellar. It is a problem that worries every housekeeper who tries to vary her meals.

The Review will be glad to have you share the secret of how you feed your family with sufficient vegetables during the winter, with the other readers of this page. Mail in your suggestions and favorite recipes to the Editor.

Some New Recipes

SCALLOPED CABBAGE

4 c. cabbage
1 c. buttered crumbs
2 tbsp. butter
2 tbsp. flour
1 tsp. salt
½ tsp. pepper
1 c. milk
½ c. liquid from cabbage

Cut cabbage into very small pieces with a sharp knife. Boil in salted water until nearly tender, then drain. Spread one-fourth cupful of the buttered crumbs in the bottom of a baking dish, put one-half of the cabbage over this, and then another fourth of the crumbs and the remaining cabbage. Over this pour a white sauce made from the butter, flour, seasoning, milk and liquid from the cabbage. Sprinkle the rest of the crumbs on top. Bake in a slow oven until the cabbage is thoroughly heated through and the crumbs browned on top. This baking will complete the cooking of the cabbage. Serve hot.

This is a particularly appetizing and nutritious vegetable dish.

LADY CABBAGE

4 c. finely cut cabbage
2 tbsp. butter
2 tbsp. flour
½ tsp. salt
Dash of pepper
½ c. milk or thin cream
½ c. liquid from cabbage

Cut cabbage into fairly fine pieces with a sharp knife. Cook in salted water until tender, then drain. While it is cooking make a white sauce of the other ingredients. Pour sauce over cabbage, heat together for a few minutes, and serve hot.

CREAMED CELERY

3 c. celery cut fine
3 tbsp. butter
3 tbsp. flour
1 tsp. salt
Dash of pepper
1 c. milk
½ c. water in which celery was cooked
Cook celery in boiling salted water until tender, then drain. Make white sauce of other ingredients. Pour over celery, heat together and serve.

CELERY AU GRATIN

4 c. celery cut fine
2½ tbsp. butter
2½ tbsp. flour
½ tsp. salt
Dash of pepper
1 cup milk
1 c. water in which celery was cooked
1 c. buttered crumbs
½ c. grated cheese
Boil in salted water until tender, drain. Cover bottom of baking dish with crumbs, then a layer of celery, crumbs, ½ of the cheese, celery, covering with white sauce and remaining cheese, then final cover of crumbs. Bake until crumbs are browned. Serve hot.

Children who know why they should have milk, fruits, vegetables, and whole-grain breads and cereals are more likely to keep good eating habits when they have to choose their own meals.

Health and Happiness for 1928

On New Year's Day in the "Philadelphia Ledger", Kathleen Norris has written some resolutions for the women in business which are just as pertinent to the woman in the home. She says—

"In the first place, whatever you are doing, determine to have health in 1928. Determine to end the fatigue and headaches, the general sense of being less than really well. Walk to work if you possibly can; those dozen blocks at the beginning of the day will be priceless to you, and walk home if it is not too late or too stormy. While housekeepers get plenty of exercise, do they get enough out of doors? Eat about half as much heavy foods as most persons do. Cut down on meat, pastries, fresh white bread, sweets and make up the bulk—or more than the bulk—with green foods, vegetables, coarse breads, cooked fruits. Drink a glass of water when you get up, another at 11, another the last thing at night. Just this one simple rule will make you feel like a new woman.

"In the second place, resolve to be clean. This will sound like a joke to some of our younger office workers, who spend half of their salaries on soaps, perfumes, powders, beauty parlors and dainty underwear. It really applies to the older women in business, the women who belong to that generation that, frankly and simply, did not bathe.

Healthy, clean—and then what, for a third resolution? What a golden year this would be if women everywhere, in their own homes as well as in shops and offices, would add "sweet" to that list healthy, clean and sweet—that fulfills our ideal for the womanhood of America. Sweetness and gentleness and amiability are tremendous assets in business life; women do sometimes rise without them, to be sure, and now and then some snapping, angry, resentful girl is promoted by her sheer force of her cleverness or knowledge. But it is much easier to succeed with them than without.

"Make a resolve to do a little good reading this year and slip a slim little leather Shakespeare, Browning or Stevenson into your coat pocket to read in the car. Get to know something of the poets Shelley and Patmore or buy one of the finer collections of poems and browse over it for a month."

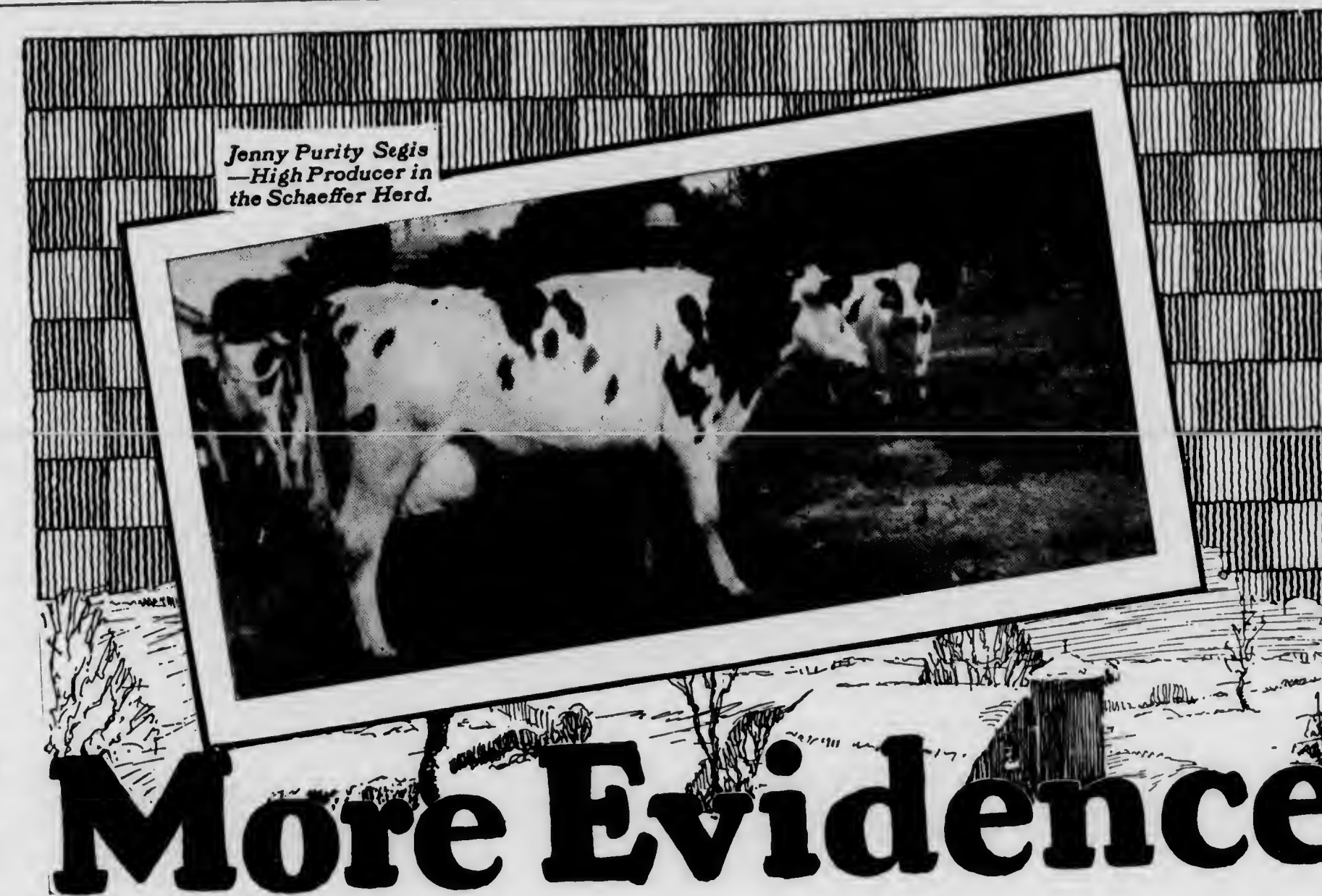
The desire for culture, travel, music and educational advantages is an ambition we all have in common with the girls who write to Mrs. Norris. This ideal, she feels, is being striven for and attained by many women in America.

"The tragedy is not that girls fail to reach that goal. It is that when they get there, or are in sight of it, some flaw in health, in personal habits, in amiability or self-control or culture, holds them eternally away from it.

"Get ready for your great destiny while it is getting ready for you. Every woman has her chance. But only one woman out of twenty is able to grasp it when it comes."

The way to hasten the coming of this opportunity is to resolve from today on to be the BEST worker possible at the job we are holding whether in the office or in the home.

"We all know exactly what that involves, we knew it when we were in the second grade, but we didn't bother about it then. It means promptness, cleanliness, cheerfulness, courtesy, it means study of other persons' needs and wishes, it may mean giving up some pleasure to remain to straighten stock some night



More Evidence

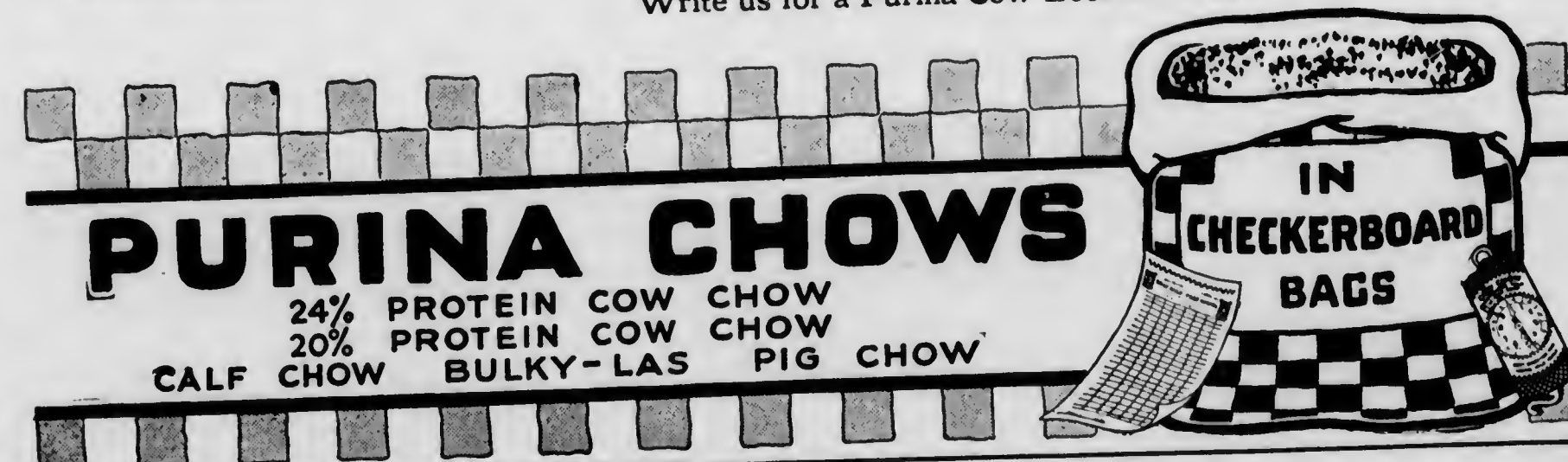
THE R. L. SCHAEFFER herd of 24 Holsteins, Allentown, Pa., has had the 1st and 2nd high cows in the Carbondale Lehigh Cow Testing Association for the past three years.

This herd has been fed Purina Cow Chow regularly for six years.

You can be mighty sure that the Schaeffer herd, or *any other herd*, wouldn't be getting Purina regularly if it didn't pay to feed it.

Order Purina from the store with the checkerboard sign.

PURINA MILLS, 854 Gratiot Street, St. Louis, Mo.
Eight Busy Mills Located for Service
Write us for a Purina Cow Booklet—free



or renouncing some old acquaintance—we can't call her friend, exactly—whose advice and influence are set dead against authority and cooperation. It means definitely forming an ambition to make one's self valuable. Very simple, once you think it out. And the infallible beginning of success."

Prevent wash-day back aches by setting the wash tub at the right height. The top of the tub should come to the bend of the hips.

Philadelphia Inter-State Dairy Council

General Offices

Boyetown Building, Philadelphia

A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value in nutrition.

Affiliated with the National Dairy Council

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This 16-cow dairy— AMCO FED—



earned \$2,000 over
feed, roughage, and labor
costs in a year

H. L. FORBES of Sandy Lake, Pa., is a member of the Mercer County Cow Test Association and keeps careful records on his herd of sixteen milking cows.

In a year, his herd produced 172,196 lbs. of milk and 7531 lbs. of butter, or an average of 10,762 lbs. of milk and 470.6 lbs. of butter per cow. His profit for the year, over grain, roughage, and labor costs was \$2015.76.

Two cows in his herd, purebred Holsteins, produced in a year, 28,171 lbs. of milk and 1163 lbs. of butter, worth \$650.02, giving him a net profit of \$331.32.

These records were made on Amco feed. He is an enthusiastic supporter of open formula feeds, Amco-mixed, having used them for four years.

Amco-Fed Cow Leads in Westmoreland County Association

A registered Holstein owned by R. A. Eisaman of Irwin, Pa., led the Westmoreland County Cow Test Association last year for butterfat production with 544.7 lbs. of butterfat. Another cow in his herd produced 15,102 lbs. of milk and returned him a profit over feed cost of \$343.56. Mr. Eisaman's herd is fed Amco open-formula feeds.



For a greater net profit from your herd,
use **AMCO 24% DAIRY**. Ask your
Amco Agent to quote you.

AMCO

FEED MIXING SERVICE

AMERICAN MILLING COMPANY
EXECUTIVE OFFICES: PEORIA, ILL.

Plants at: PEORIA, ILL.; OMAHA, NEB.; OWENSBORO, KY.
Alfalfa Plants at: POWELL, GARLAND, and WORLAND, WYO.
DIVISION OFFICE: MUNCY, PA.

Burlington County (New Jersey) Boy Wins National Milk Judging Contest

John B. Tilton, Jr., of the Mount Holly, N. J., High School, won first place in the milk judging contests for vocational school students at the National Dairy Show, recently held in Memphis, Tenn.

Contestants from 29 states participated and Tilton beat his nearest competitor by a point and a half.

Young Tilton received a silver loving cup as a reward for his successful work.



John R. Tilton, Jr., on the left
C. B. Davenport on the right

The importance of studying the quality of milk as a school subject can scarcely be over-emphasized. The boys learn to distinguish objectionable odors and flavors; they make tests of the quality of sediment in the product; and they observe the containers to see that no dirt can be taken into them during transit to the consumer. All these things go back directly to a study of the farm practices, which produce milk of good quality.

In preparation for this contest the various boys in the vocational schools received instruction from C. B. Davenport, of the New Jersey High Schools; B. J. Marsh, of the Philadelphia Inter-State Dairy Council and Prof. F. C. Button, of the New Jersey College of Agriculture.

Paint Retards Weathering

Painting is the best means known for protecting exposed wood from the deterioration known as weathering.

Weathering is caused by the shrinkage of the surface layers of wood fibers with rapid moisture changes. Two softwood boards, one unpainted and one painted with three coats of ordinary house paint, were exposed to the weather for one year at the forest products laboratory of the Forest Service, U. S. Department of Agriculture. At the end of the year the edge grain of the unpainted board was already considerably "weather-boarded" because of the permanent "set" resulting from differences in the swelling and shrinkage of spring wood and summer wood. The only irregularities on the surface of the painted board at the end of the year were the marks of the brush.

The average annual cost of replacing farm machinery is halved if the implements are stored as they should be.

The State Board of Health and its Control of the Milk Supply

THEODORE APPEL, M. D.
Secretary of Health
Commonwealth of Pennsylvania
(Continued from page 8)

standard flexible enough to apply to the whole State, allowing the local communities limited power of raising this standard? Shall the State assume control of all milk supplies because there is not efficient supervision today or shall the State continue in an advisory capacity? Shall the municipality be relieved of responsibility? On the other hand, will the municipality relinquish its present right of self government? The question of centralization is ever before us. While these questions are being solved should it not be the policy of the State Department of Health to continue to:

1. Promote inter-state cooperation so as to more efficiently control milk coming into our borders from outside.
2. Encourage municipal supervision through the adoption of local milk ordinances so as to extend the now limited inspection areas.
3. Prepare minimum requirements for milk sold in townships of the second class and in municipalities without a local milk ordinance.
4. Assist, on request, in establishing municipal control and in the instruction of local inspectors.
5. Assume State control in municipalities where milk supervision is useless or unfair.
6. Investigate complaints received from consumers, civic organizations, producers, distributors, etc., when such complaints cannot be handled by the local inspector.
7. Protect municipalities and those interested financially in the milk business against unfair methods and the sale of useless or faulty equipment.

Such activities do not assume the responsibility of the municipality. They do not centralize authority but rather establish a central bureau of information and assistance for those who desire to efficiently perform their duty in this branch of public health service. In addition protection is provided for milk supplies that do not receive the attention of local health officials.

Carelessness Results in Damaged Eggs

Farmers who ship eggs by the case are suffering a heavy loss because of their own carelessness. A recent examination by the Pennsylvania Bureau of Markets of a large number of shipments at four points in the northern section of the State revealed an average damage of 7.5 eggs per case when the eggs were delivered to the station by farmers for shipment.

All except one of the cases had old packing material, 27 per cent had dirty eggs, 16 per cent had long eggs standing above the fillers and 2 cases had duck eggs present. To further show the lack of grading, the cases varied in weight from 52 to 62 pounds and the individual eggs ranged from 15 to 82 ounces per dozen. Only three cases contained graded eggs.

"Use the best packing material and pay more attention to the grade of eggs in the case" is the suggestion of the State Bureau of Markets to producers who are anxious to secure the highest possible price for their eggs.

A Philosophy of Production

RAYMOND G. BRESSLER

(Continued from page 1)

"Service above self" is the predominating motive of the interplay of human beings.

With this introduction before you in order that we may better understand each other, let us proceed with the discussion.

It would seem, as we view the interests of different classes of people, that there are grave antagonisms. As a producer of food products it certainly looks as if it would be a great advantage to me personally to receive \$16 a hundred for my milk; \$3 a bushel for potatoes; \$1 a pound for chickens; \$2 a dozen for oranges, \$5 a bushel for wheat, and so on, provided I can continue to buy ice cream at 50 cents a quart, sugar at 7 cents a pound, and bread at 10 cents a loaf as usual. But as a consumer, I object to paying the prices mentioned. They are out of harmony with my ability to pay and furthermore it is my personal inclination to buy as cheaply as possible. I want milk at 8 cents a quart, potatoes for 75 cents a bushel, eggs at 25 cents a dozen, and so on.

Now this antagonism between my producer nature and my consumer nature is very real. If these two urges within me are at loggerheads and can be held in control with great difficulty, how much more serious is the problem of harmonizing the differences in the body politic. And yet this factor, as I see it, is the very crux of all the farm problems. All the measures for farm relief fall short of a real proposal of relief in that they are based on a supposition that you can artificially raise the price over a long period of time without calling down upon the producers the wrath of the consuming public. Thus the antagonism of interests between the consumers and the producers may develop into a great social misunderstanding, having the profoundest historical effect on our national progress.

In the eternal strife between producers and consumers, we find, on the one side, industry, representative of the urban in our population, whose producers face agriculture as consumers of food and raw materials. It is their interest to buy products as cheaply as possible. On the other side, the farmers, representative of the rural in our population, confront the city as consumers of the products of urban industry which the industrialists desire to sell as dearly as possible.

No one problem confronting the government of the United States has consumed one-tenth the journalistic space nor one-half the serious attention of our public officials as has, during the past three years, the question of farm relief. We hear it on every side. It promises to be the leading issue in the next presidential campaign. It will reappear from time to time as long as the nation endures. The peculiar thing

about it is that it is real and something must be done with it and that most of the other nations have just as serious farm problems as we have. Their leaders are striving just as diligently to solve farm problems as are ours.

So far it has appeared that our problems were simply producer-consumer difficulties. There is another factor that complicates the situation enormously. Wage labor gives to production a different character. When the producers and workers were one and the same people it was a simple commodity problem. Only theoretically is the laborer now a producer. Economically he ceases to be one except as you count labor power to be a commodity product. His wages do not fall so quickly and to such a low point as do the prices of commodities. Neither do they rise as quickly and to such a high point. He, therefore, has an interest in the fall of commodity prices and an objection to their rise. He has most to lose from artificial dearthness of commodities through tariffs or inflation. His influence is thrown on the side of the consumer where he has most to gain, and not with the producer who is interested in high prices.

There are various ways by which the producers of agricultural products and the consumers of farm produce may meet on a plane of common understanding and amicable feeling toward each other. To a slight degree this mutual trust in each other may be fostered in a spiritual way through the community lovefeasts that are becoming increasingly popular throughout the nation. I have in mind especially the inter-group gatherings sponsored by the Rotarians, Kiwanians, Lions, and other service clubs, and reciprocated by Farmers' Clubs, Cooperatives, Farm Bureaus, and Granges. But the machinery to translate the good fellowship that prevails in these meetings into unified action is not inherent in the gathering itself. We must look elsewhere for more definite accomplishments. The State and Federal governments, of course, by the power vested in them, can do something. But a law regulating the economic activities of groups of peoples is a very artificial thing and most unpleasant and unsatisfactory to enforce, and furthermore, governmental action has always been for the benefit of the consumers and not the producers.

To my way of thinking, that organization which is based on a fundamental economic need which has been called into being to render service both to the producers and the consumers of agricultural produce is the most likely to succeed. I know of no better illustration than the Inter-State Milk Producers' Association, a one commodity organization.

*Extracts from an address given at the Annual Meeting of the Inter-State Milk Producers' Ass'n.

Standard Grades For Farm Products

"Standard Grades for Farm Products" is the title of Bulletin 450 recently issued by the Pennsylvania Department of Agriculture.

This publication gives the latest revised standard grades for apples, potatoes, wheat, peaches, grapes, cabbage

and the grades and classifications for poultry flocks, hatcheries and baby chicks. In most cases the grade requirements are exactly the same as the official standards of the United States.

The bulletin is free and can be secured by writing to the Department of Agriculture at Harrisburg, Pa.

Educational Entertainment

The Various Departments
of the

Philadelphia Inter-State Dairy Council

are at your service and will assist
you in planning Educational Enter-
tainment for your Community, Local
Membership Units, Schools, Granges
and Farmers' Clubs

There are available for you, as far as
our facilities will permit, Lectures,
Speakers, Motion Picture Films,
Lantern Slides and Special Health
Promotion Talks and Demonstrations
as well as material that you can
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This service is rendered free in dis-
tricts where producers and distribu-
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Council Program

Let Us Help You in Planning Your Entertainment

Write for Detailed Information
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Philadelphia Inter-State Dairy Council

R. W. BALDERSTON, Secretary

1211 Arch Street
Philadelphia

SERVICE SATISFACTION SQUARE DEALS



When you need supplies or perhaps a piece of equipment do you send your order where it will receive the best attention and you the most satisfaction?

It has taken us many years to build up the fine organization Cherry-Bassett stands for. Our good reputation represents many years of square deals to everyone. These years have not been wasted—but you should join the large number who are taking advantage of them.

The combined stocks of our two divisions listed below is about the largest and most complete in the east. Our long mail order experience assures good service and complete satisfaction.

On your next order whether it be large or for just a trifle, we would like to show our ability to serve you.

A copy of the Bestov Supply Book which is complete in its description of supplies and equipment for milk producers will be mailed to you on request.

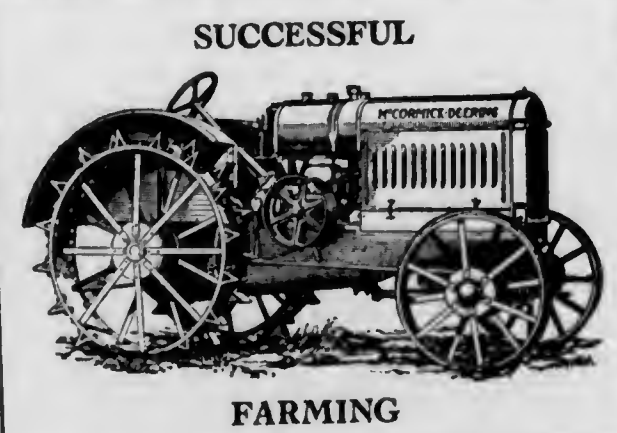
Cherry-Bassett Company

2324 Market Street
Philadelphia, Pa.

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LOOK AHEAD

The foresighted man is the one who prospers in the long run. The farmer who purchases a McCormick-Deering Tractor is looking ahead towards many years of successful farming.



McCormick-Deering Tractors made before 1920 are still in good and serviceable condition. This fact is a testimonial of the long life of these tractors, due to the excellent materials used and the careful construction.

**International Harvester Company
of America, Incorporated**

Philadelphia

Harrisburg

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Half of Pennsylvania Cattle Tuberculin Tested

Dr. T. E. Munce, director of the Bureau of Animal Industry, State Department of Agriculture, announced recently that half the cattle in Pennsylvania have been tested for tuberculosis. One or more tests had been given up to July 1 to 630,000 of the total cattle numbering 1,280,000.

On July 1, a total of 4,081 herds were fully accredited under the individual herd plan, having passed two or more clean tests. Likewise all the herds in 14 counties had been tested under the area plan, and nine of these counties were accredited.

The counties which are regarded as "modified accredited counties", being practically free of bovine tuberculosis, include: Butler, Cameron, Clearfield, Crawford, Indiana, Jefferson, Lawrence, Mercer and McKean.

The following five counties have been completely tested but have not qualified as accredited areas: Columbia, Elk, Monroe, Potter and Union.

A waiting list of 2,572 individual herds in 54 counties and all the herds in 256 townships in 45 counties was reported by the Bureau.

Judging by the rapid rate at which cattle have been tested during the past few years, it is predicted by Bureau officials that bovine tuberculosis will be reduced to less than one-half of one per cent by the end of 1933, providing adequate funds are made available during the intervening years. Funds for the biennium 1927-1929 total \$2,160,000 and will provide for more than a million tuberculosis tests.

One of Every Five Farmers, a Cooperator

Approximately 15,000 Pennsylvania farmers have become members of co-operative buying or selling associations during the past six years, says the Bureau of Markets of the Department of Agriculture at Harrisburg.

In 1922, the total membership in co-operative organizations in this State was 29,020 while by the end of 1926, this figure had increased to 44,509. It is estimated that one of every five farmers is now a cooperator, allowing for duplication resulting from one farmer being a member of two or more organizations.

The volume of business of these co-operative associations has also increased greatly since 1922, when the total was approximately \$27,000,000. The 1924 sales amounted to \$32,409,000 and the 1926 sales to \$35,177,000.

Since 1919 when the law legalizing non-stock cooperative associations was enacted, cooperative business among farmers has made rapid progress.

Each year, the Bureau of Markets makes a careful analysis of the annual reports of all cooperative associations organized under the 1919 law. The results are made available to the managers and directors of all these organizations to be used in promoting greater efficiency in their business.

Start the 1928 Garden

It will pay well to begin this year's garden right now by applying 15 to 20 tons of manure per acre and plowing this under. Plow as deeply as possible without turning up an excessive amount of subsoil. This treatment will improve the physical condition of the soil, increase the amount of organic matter and plant food, and make more plant food available early in the growing season.

Chester County Dairyman Adopts Trade Name for Herd

"Shady Moor" is the herd name decided upon, by John K. Lynch, Cochranville, Pennsylvania, for his pure bred Holstein herd, under the registry records of the Holstein-Friesian Association of America. This trade name "Shady Moor" is now authorized as a part of the name of each individual animal in the herd.

This prefix trade name will be used by Mr. Lynch as a further means of identifying individual animals by indicating the farm where the animals were born.

Since the system was established more than 15,000 Holstein breeders have reserved trade mark names for their stock.

Inter-State Milk Producers' Association

Incorporated
Boyetown Building, Philadelphia, Pa.
Representing over 21,000 Dairy Farmers in the Philadelphia Milk Shed

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Know Your Dog Law

One of a series of articles on the Pennsylvania Dog Law prepared by the Bureau of Animal Industry, Pennsylvania Department of Agriculture.

DO YOU KNOW

That a dog is personal property under the Dog Law and its value can be recovered if illegally killed?

That without the Dog Law, there would be no check upon the careless and irresponsible dog owner, nor would he be liable for any damage caused by his dog?

That the present Dog Law provides the only means through which a person can be reimbursed for damages caused by dogs?

That thousands of dollars are paid annually to owners of livestock and poultry in connection with damages caused by dogs?

That without the Dog Law the number of stray, unowned, uncontrolled dogs would rapidly increase, with a subsequent increase in the loss to private property; a decrease in the wild life of the State and the danger of an increase in the spread of rabies?

Making Hay in November

H. E. KIEFER

There is a time for everything but November is not the usual time for making hay. Yet it was actually done in November, 1927, at Hare's Corner, five miles south of Wilmington, Del., along the duPont Highway. Farming is a seasonal occupation; that is, only a few weeks each year are devoted to the same field operations. The haymaking season is a few weeks in the summer, but Arthur J. Mason, of Chicago, has invented a process by which he cures hay artificially any time between early spring and late fall.

He has also put a kink in the old saying, "Make hay while the sun shines," as he makes it in the rain. Not that he prays for rain, but as hays grow best in sections where frequent rains make it difficult to cure he has devised a system that works regardless of showers. The plant at Hare's Corner is the property of the Mason Alfalfa Process Company, a Delaware corporation with offices at 1520 Locust Street, Philadelphia.

The Mason Process is a complete system from the standing green alfalfa or other hay crop in the field to ground meal in sacks ready for shipment. No rakes, forks, or hay loaders are used in the field but instead a combined mowing and loading machine is substituted. This machine cuts the alfalfa, picks it up before it can fall to the ground, and loads it on to a truck traveling at its side. It is transported to the dryer and dumped to an inclined conveyor which carries it to the head of a tower where ingenious machinery takes all the tangles out of it and weaves it into a very uniform layer or mattress ten to fourteen inches thick and nine feet wide. Another conveyor carries it through a tunnel 150 feet long where heated air and gases from a furnace complete the curing in about thirty minutes. At the end of this conveyor it is again disentangled and automatically passed through a grinding mill and from thence to stockhouses or a bagging machine, as desired. Within one hour after it is standing in the field the alfalfa is cut, cured, ground into a meal almost as green as the grass itself, and bagged ready for shipment.

The advantages claimed for the process are:

1. A greater yield per acre as there are no leaves or stems lost in the field.
2. A hay which has one-third more protein than sun cured hay due to the prevention of fermentation and the saving of the many leaves now lost in the field.
3. Makes hay rain or shine every day from early until late in the season. In this section this is from May until November. One plant operated up to November 5.
4. The temperature at which it is cured kills all the weed seeds and farmers using these feeds do not encourage weeds by the "manure route".
5. A hay which is always uniformly green and of a very superior feeding value, better than wheat bran and some of the other concentrates.

The New Castle plant, owing to lack of alfalfa, operated a short time only in November, as stated, but will be operated continuously next season and supply the farmers in that vicinity with products which experiment station analyses show is far superior to sun-cured feeds made from these same crops.

Farm Products Show

Where to see the various exhibits of the Pennsylvania State Farm Products Show, which will be held in Harrisburg, Pa., January 17th to 20th, 1928:

Emmerson - Brantingham Building, Tenth and Market Streets, Show Headquarters. Exhibits of dairy products, dairy equipment, farm machinery, apiary products, apples, tobacco, orchard supplies and machinery.

Harrisburg Duco Building, 38 N. Cameron Street. Exhibits of dairy cattle and pigeon show.

Shaffer Building, 54 S. Cameron Street. Exhibits of potatoes and potato machinery.

Myers Building, Cameron and Mulberry Streets. Exhibits of baby beaves, swine and fat lambs and auction sales. Vance Building, Fourth and Chestnut Streets. State educational exhibits, corn, small grains, wool and eggs.

Chestnut Street Market House, Chestnut Street, between Second and Third Streets. Chicken show.

Every-Other-Month Testing Suggested for Small Dairy Herds

Dairymen owning small herds may obtain many of the benefits of association testing at a lower cost per cow than would be obtained by the regular dairy herd improvement association method. This fact is brought out in Circular I-C entitled "Testing Cows for Production Every Other Month", by Dr. J. C. McDowell, dairy husbandman of the United States Department of Agriculture. As the title suggests, the method involves testing every other month or six times a year, instead of every month or twelve times a year as in the regular association. In other respects the two methods are alike.

The figures used in the study on which the circular is based were those from a herd of 70 cows at the Minnesota Agricultural Experiment Station and included the day to day milking records for the year. With these figures as a basis, the feed, production, and income records were calculated for six test days and the errors were computed by comparison with the actual figures for the year. The average error due to testing one day in two months was 3.8 per cent as compared with an average error of 2.91 per cent in monthly tests. In 24 cases out of 70 the error was 5 per cent or more as compared with 16 cases out of 70 in the monthly method. The greatest error was 12.5 per cent as against 8.3 per cent on the monthly basis.

The circular concludes: "It is not expected that the method of testing every other month will take the place of the regular dairy-herd-improvement-association method but that it may find its own place in those districts where the dairy herds are small."

A farm business without some kind of records such as an annual inventory is like a clock without hands. You cannot tell whether it is gaining or losing, nor even where it stands at any one time.

The average person is using more milk than he used to, but the number of cows in the country is decreasing each year. The answer is, each cow is producing more than formerly.

Cooperation in selling and cooperation in buying should go hand in hand.

FOR SALE

Farm of 140 acres; 30 acres woodland, 10 acres bearing apple trees; balance good fertile land under cultivation last year. Situated 2½ miles from town, good roads. Two story frame house, good stable, fair barn and poultry house. Price \$7500; Terms: \$3000 cash. For sale to settle an estate.

Executors, P. O. Box 135
Bridgeville, Delaware

LIME-MARL

A Precipitated Lime. Brings quick, sure, full results. High analysis, excellent condition. Most satisfactory agricultural lime on the market. Before buying, write me for prices, and full information. Write to-day.

G. C. KIBBLER
572 W. Market St. York, Pa.

TUBERCULIN TESTED MILCH COWS

Subject to 60-Day Retest
Registered and High Grade
Immediate Delivery
Anderson's Sale and Exchange Stable
Horses and Harness
Edinburg Road, R. F. D. 2
Bell Phone 3099R2 Trenton, N. J.

QUALITY CHICKS

Chicks from winter laying, farm raised mature stock S. C. W. Leghorns, R. I. Reds, Barred Rocks, White Orpingtons, Anconas, Black Jersey Giants, White Wyandottes, White Plymouth Rocks, Black Minorcas, Pekin and Indian Runner Ducks; \$15 per 100 up. Live delivery guaranteed. Parcel Post prepaid. Hatching eggs, \$5.00 per 100 up. Several breeds rabbits. Circular free. Shipments will be made from one of our nearest associated hatcheries.

Glen Rock Nursery and Stock Farm
126 B Ridgewood, New Jersey

Lime and Fertilizer SPREADER

That will do the best of work, made to attach to any farm cart or wagon
\$15.00. Send for circular
J. S. GREENLEAF ANSON, MAINE

Your Entire Flower Garden for \$1.00 Post Paid
We offer to Flower Lovers with small yards this collection for \$1.00, or 3 collections for \$2.50.
10 Top sized Gladiolus Assorted, 5 Assorted Cannas, 1 Peony, Red, White, Pink or Lavender, 5 Assorted Dahlias—all giants, 2 Blue Delphinium, 5 Assorted German Iris, 2 Hardy Mums.
Ask for Delia List—full of Gems
Z. J. STODDARD MT. HOLLY, N. J.

FOR SALE
Eureka Two-Row Potato Planter
Never been used
Price gladly quoted on request
FREDERICK SHANGLE
R.F.D. 3 TRENTON, N. J.

Use Good Utensils
It is poor economy to purchase cheap utensils. A good quality of utensils, with smooth sides and bottoms, will do much to improve the quality of dairy products.

I am of the opinion that my life belongs to the whole community, and as long as I live it is my privilege to do for it whatsoever I can.—George Bernard Shaw.

Store credit costs more than bank credit because storekeepers are equipped to handle merchandise and not credit; bankers are equipped to handle credit and not merchandise.

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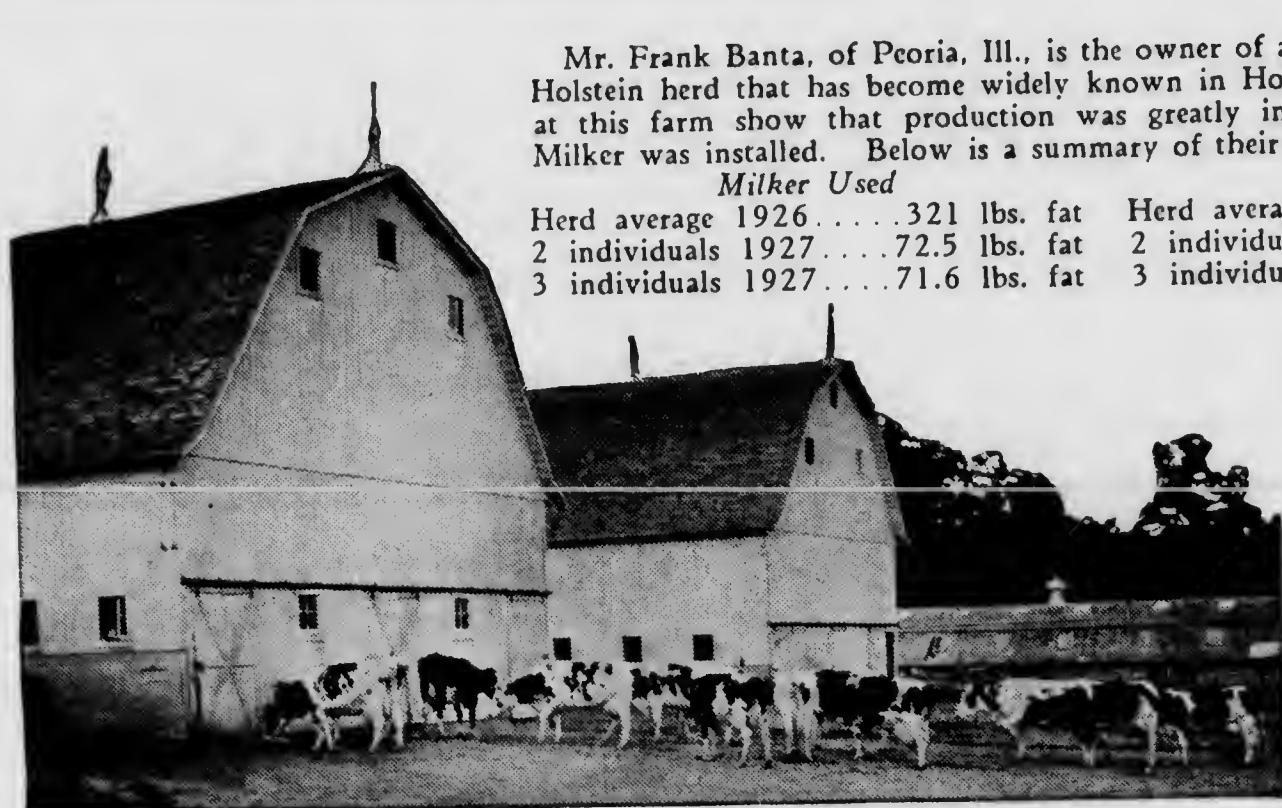
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Mr. Frank Banta, of Peoria, Ill., is the owner of a highly developed purebred Holstein herd that has become widely known in Holstein circles. Records kept at this farm show that production was greatly increased after the De Laval Milker was installed. Below is a summary of their records for two years:

Milker Used	Hand Milking
Herd average 1926.....321 lbs. fat	Herd average 1925.....245 lbs. fat
2 individuals 1927.....72.5 lbs. fat	2 individuals 1926.....56.3 lbs. fat
3 individuals 1927.....71.6 lbs. fat	3 individuals 1926.....41.2 lbs. fat

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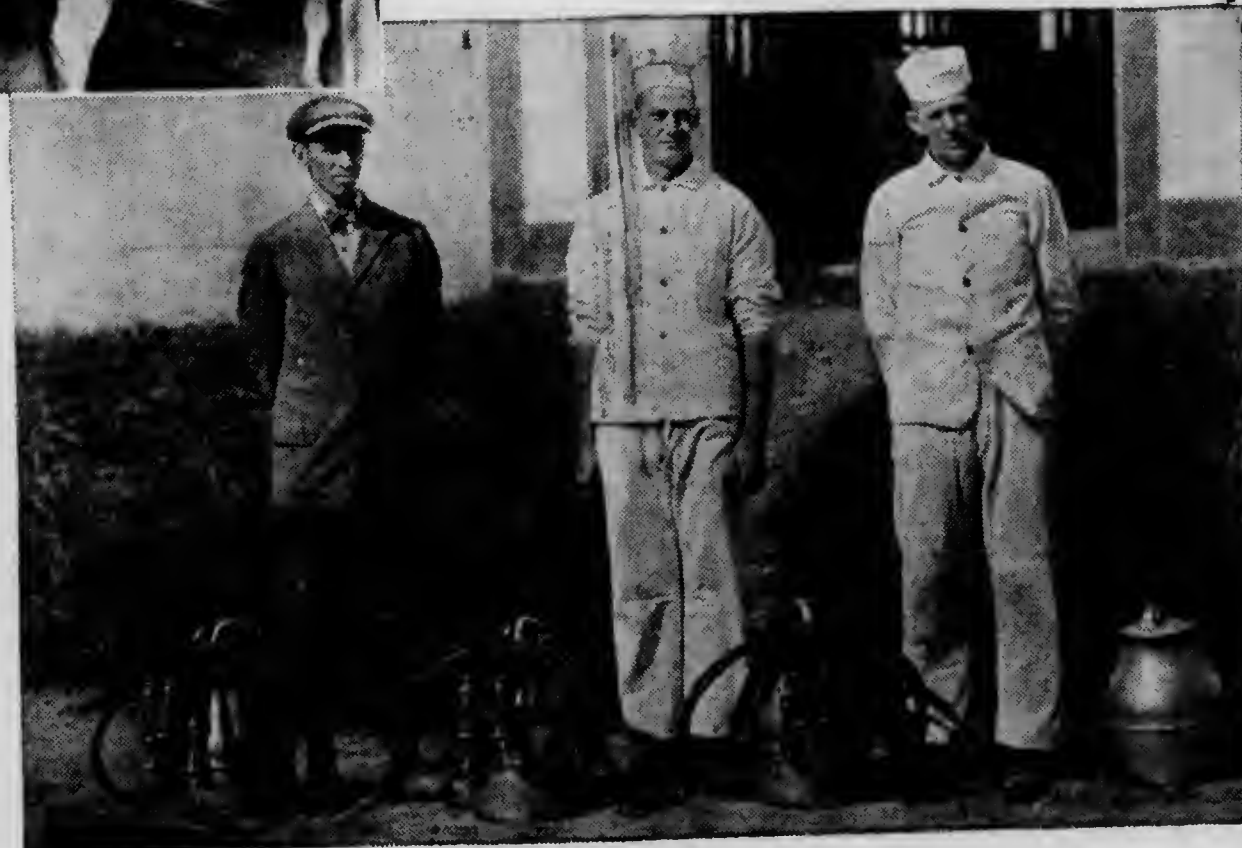
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Right: Mr. George Campbell, owner of the Cleburne Jersey Farm at Spring Hill, Tenn., and his highly developed purebred Jerseys are widely known. A De Laval Milker is used exclusively and is regarded as a necessity where better milking is required.

Below: The splendid purebred Ayrshires kept at Locust Farm, Warwick, R. I., owned by Mr. E. H. Parsons, are well known for type and production. A De Laval Milker is used with marked success.



Fairweather Farm, owned by C. S. Fayerweather, is the home of a fine purebred Guernsey herd that is rapidly reaching a high point of development. Several outstanding records have been made by individuals of this herd recently. Fairweather Compiegne has just completed her record in Class DDD with 10,483 lbs. of milk and 575.2 lbs. of butter-fat. When this record becomes official she should be a Class Leader taking second place and champion of her class in New York State.



Milk Producers' Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE

Volume VIII

West Chester, Pa., and Philadelphia,

January, 1928

Number 10

Penna. Dairymen's Association Holds Third Annual Meeting

From every standpoint the Third Annual Meeting of the Pennsylvania Dairymen's Association, held on January 18th, during the week of the Pennsylvania State Farm Products Show, in Harrisburg, Pa., was outstanding in character. The attendance far exceeded that of previous years, the average during the session totalling from 250 to 450 persons.

The various addresses presented at

a decrease in the number of cows milking but the average yearly production per cow has increased.

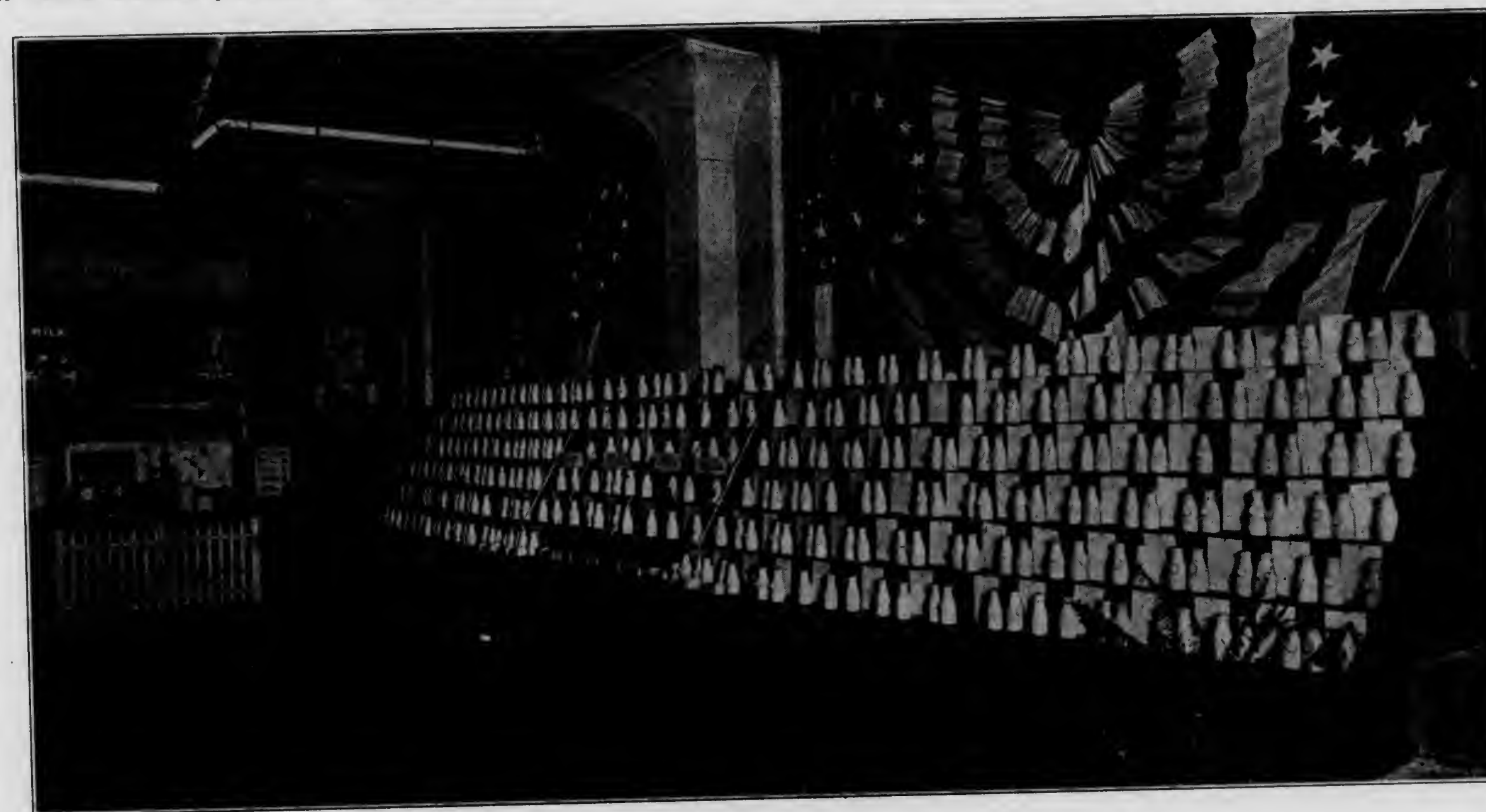
The increase in purebred cattle and the decrease in the number of diseased cattle has been an important factor in this relation. The cow testing associations and other agencies, such as the Boys' and Girls' Calf Clubs have also been proven factors in the work of better production methods.

Penna. Farm Products Show Biggest and Best Ever Held

The record achievement attained by the Twelfth Annual State Farm Products Show, held in Harrisburg, Pa., January 17th to 20th inclusive, under the first direct management of the Pennsylvania State Farm Products Show Commission, is one that it can well be proud of.

From every angle the 1928 Show was outstanding in character. It exceeded all previous records as to the floor space

exhibit purposes. Here were shown exhibits of dairy products, dairy equipment, miscellaneous farm machinery, apiary products, tobacco, apples, farm equipment orchard supplies and machinery. (2) The Harrisburg Duco Building, where the dairy cattle and pigeon shows were held. (3) The Shaffer Building which housed the potato show and potato machinery. (4) The Meyers Building which housed the Baby Beef,



MILK AND BUTTER EXHIBIT
Pennsylvania State Farm Products Show

meeting were outstanding in character and covered subjects of special and pertinent interest to the membership.

The session opened with an annual address by Prof. E. B. Fitts, president of the Pennsylvania Dairymen's Association. He said in part:

"The association has been active during 1927. It has used its influence toward the enactment of desirable legislation, it has sponsored important work of various kinds, it has encouraged constructive cooperative marketing. It has given active support to the Pennsylvania Department of Agriculture in its program of disease elimination from the herds of our state and has participated in other activities. In addition to the annual meetings, which are held in Harrisburg, another meeting was held last year during the summer season at State College, Pa. A constructive program was arranged and the meeting was attended by 200 dairymen. The gross membership of the association now numbers about 400.

"Changes in dairy cow population and production bear an important relation to the production of milk. There has been

Prof. Fitts referred to the work of the bull associations. Pennsylvania leads all states in the Union with 63 associations, having 830 members owning 229 bulls which are being bred to approximately 10,000 cows.

Referring to cooperative marketing, Prof. Fitts said "The cooperative movement is spreading among dairy farmers in Pennsylvania. Approximately 30,000 farmers are members of the three great dairy marketing organizations:—The Inter-State Milk Producers' Association, the Dairymen's Cooperative Sales Co. of Pittsburgh and the Dairymen's League, Inc. These great bodies of dairy farmers are working out, through their several organizations, their common problems. Their programs cover the field of production in all its various phases, uniformity of supply, standardization of quality, transportation, proper distribution and the maintenance and enlargement of markets.

The Philadelphia Inter-State Dairy Council and the Pittsburgh District Dairy Council are maintaining quality and assist farmers in making quality

(Continued on page 8)

occupied by exhibitors. It exceeded all previous records as to attendance and many of the agricultural meetings held during the week of the show also held record attendance meetings.

The exhibit was under the direct management of the Pennsylvania State Farm Products Show Commission, formed under laws passed at the last session of the Legislature, and is composed of the following members: Hon. John S. Fisher, Governor; Hon. C. G. Jordan, Secretary of Agriculture; R. C. Bressler, Deputy Secretary of Agriculture; R. L. Watts, Dean Agricultural Department, Pennsylvania State College; M. S. McDowell, Extension Department Pennsylvania State College; H. C. Fetterolf, Pennsylvania Department of Education; H. D. Allebach, President, Inter-State Milk Producers' Association; Miles Horst, Secretary, Pennsylvania Potato Growers Association and John H. Light, Secretary, Pennsylvania State Grange; H. E. Klugh was the manager in charge of exhibits.

The various displays were held in (1) the Emerson-Brantingham Building, where three floors were devoted to

swine and fat lamb exhibits and (5) the Vance Building where exhibits of the Agricultural Department, Educational Department, Highway Department, as well as other state departmental exhibits, corn, small grains, wool and egg exhibits were shown. In addition a very extensive poultry show was housed in the Chestnut Street Market House.

Formal Opening of the Show

The Farm Products Show was formally opened with a joint meeting of all the agricultural associations on Tuesday evening, which was held in the Chestnut Street Auditorium. The attendance fully numbered 2000 persons. Dr. C. G. Jordan, Secretary of Agriculture acted as chairman of the meeting. He formally introduced the members of the Pennsylvania Farm Products Show Commission, various members of the Governor's Cabinet and other officials of the State government. He also introduced former Secretaries of Agriculture, Charles H. Patton, Fred Rasmussen and Frank P. Willis.

The secretary then introduced three outstanding farmers in the state. They included I. V. Otto, Cumberland County, (Continued on page 7)

"What the Distributor Expects of the Producer in the Matter of Quality in Milk and Why"

H. D. DAVIS*

The subject at hand, "What the Distributor Expects of the Producer in the Matter of Quality in Milk and Why" is a very timely one inasmuch as greater emphasis is being placed on the necessity of a clean wholesome and safe supply of milk for human consumption.

There was a time when "milk was milk—when the consumer was interested in the cream line alone". That day has passed. The consumer today realizes that there are factors other than cream line which make up a bottle of milk.

When a careful analysis has been made it will be agreed that ultimately it is not what the distributor demands of the producer but what the consuming public demands of the distributor that determines what shall be required of the producer by the distributor. The distributor therefore expects the producer to know the demand of the market and meet that demand.

The business of distributing milk is more than a mere commercial undertaking. The distributor has much to do with the maintenance of good health among the people. It is his duty to educate himself to a full appreciation of his responsibility to the people and then to educate the producer to a full understanding of his relationship.

This is an era of education. It is only through education of those vitally concerned in the dairy industry that we can hope to put that industry on a basis whereby all parties concerned will be benefited.

A new day is at hand. The distributor and the producer in my opinion are beginning to look at each other problems to the end that there may be mutual protection and the guaranteeing of prosperity.

The problem today is one of service. We must operate on a quality and service basis that will meet the demands of the people. When we say people we mean the market. The ultimate consumer is our market and unless the market is satisfied success is not assured. Service to others rendered jointly by the distributor and the producer constitutes the basis of putting our industry on a firm foundation. Each must understand his part in this plan. All business is placed on confidence.

Without confidence there will be little cooperation. The distributor expects cooperation. With the confidence and cooperation of the producer the distributor will have no difficulty in giving to the consuming public that quality and service which it demands.

It is essential that a definite understanding of quality be had if we wish to eliminate the confusion in the minds of many as to what actually goes to make up quality in milk.

I have included in quality of milk:

Food Value
Healthfulness
Cleanliness
Keeping Quality
Milk as a Food

Milk is one of our most important foods. The food value of a bottle of milk is judged by the depth of the cream line, especially in the Philadelphia territory. While the butterfat content or cream line is not an entirely accurate

measure of the food value of milk yet the housewife in many cases accepts or condemns the milk on that one factor alone. The variations in the total food value of milk are so nearly proportionate to the variations in the fat content of the milk that the cream line may be used as an index to the food value of milk. Knowing the importance placed on the cream line by the housewife it is urgent that due consideration be given to this factor.

A large proportion of consumers are desirous of obtaining a milk containing about 4 per cent of fat as is evident in the fact that the sales of the higher grades of milk are increasing. The consumer will pay for a quality product.

Standards for Milk

Several states have set minimum standards for milk constituents. The distributor must see that the milk purchased meets not only these minimum legal standards, but also the standards set by the demand of the consumer. The desire on the part of the distributor to satisfy these demands and to meet competition has raised the standard of milk until today we find that low testing milk is not in demand as fluid milk. Legal standards were set to guarantee a reasonably high food value in milk and to prevent adulteration. In other words, food standards protect the public against adulteration and keep off the market milk of low food value. The distributor must constantly check his raw material by the use of the balcock tester and lactometer to make sure that the adulteration of milk is not practiced.

Herd improvement through elimination of unfit animals is making rapid strides. Elimination of unfit supplies of milk from the market will do much to educate the public to the value of milk as a food and thereby increase the consumption. It may well be asked, of what value are these minimum legal standards? They are useful in that the consuming public demands milk which meets these standards, and then begins to demand a milk which meets the need irrespective of the legal standard. The distributor begins to supply it, making it necessary to educate the producer as to how it shall be produced resulting in an improved milk supply.

The distributor expects the producer to know what the market demands in food value of milk and to strive to produce an article above reproach.

The milk industry has gained its importance because milk and milk products are among the best and cheapest foods, being easily digested and highly nutritious. Pure fresh milk is essential to the welfare of young children and invalids. Too much attention cannot be given to safeguarding the food value of milk as babies and in some cases invalids receive nothing but milk for subsistence.

Milk Must Be Safe

City milk supply problems have developed with the growth of cities. As the cities developed there was a correspondingly increasing demand for milk. Today the city is reaching out great distances for its supply. The greater the number of dairies involved in the pro-

duction of the milk the greater are the problems. Safeguarding the healthfulness of the milk is one of eternal vigilance. All germs capable of transmitting specific diseases must be eliminated from the supply at the source. Here again education enters. The distributor appreciates that the health of the consuming public is vitally affected by the milk supply. He also knows that any serious outbreak of disease of milk borne origin seriously affects the consumption of milk.

This was well illustrated in the recent outbreak of typhoid fever in Montreal.

The dealer must take the producer into his confidence. The problem of one is the problem of the other. No intelligent man objects to constructive criticism based upon fair investigation and full understanding of the problems.

The producer is criticised in many cases because he is satisfied to consume milk which he knows to be unsafe. I do not believe in scaring a man into obedience. Show the producer the dangers of a contaminated supply and rely on his good judgment to work his way out. Show him that in cleaning up the milk supply for the distributor he derives the greater part of the benefit. The plea is for the producer to protect his supply for the protection of his own family. If his family is protected we can feel reasonably sure that the city consumer will be protected. Safeguard the supply at the source.

The factors which influence the bacterial content of milk are the use or disuse of sterilized equipment, clean cows and the use of the small mouth pail. There are other factors which may contribute to the contamination of milk but these I believe are the chief factors to be considered.

Clean cows, healthy cows free from tuberculosis are required. Unsterilized utensils are a great handicap. All utensils must be kept scrupulously clean. Clean milk from a bacterial standpoint cannot be produced in unclean utensils. The responsibility for clean sterile utensils in the end rests with the producer.

The dealer has his responsibility also. The dealer for his part should see that all cans are properly cleaned, sterilized and dried before they are returned to the producer. The producer often does not have the facilities to clean cans properly and if they are not returned to him in good condition it will be difficult for him to ship milk with a low bacterial count. This is especially true when the cooling facilities on the farm are limited. The dealer wants the producer to know that the responsibility for clean utensils in the end is the producers.

Bacteria causing diseases, including scarlet fever, typhoid fever, diphtheria, etc., frequently enter the milk from contaminated water used in washing utensils, or from persons who have been exposed to disease and who handle the milk. Sterilize all utensils and no person who has been exposed in any way to such diseases should be allowed about the cows, the milk or the milk utensils.

High bacteria counts affect the keeping quality and healthfulness of the

milk. The loss to producers from the production of low grade or inferior quality dairy products are very evident. The business of the producer is not safe as long as these losses continue.

Milk Must Be Clean

Milk must be free from dirt and all impurities. Much of the contamination can easily be prevented if the possible sources of contamination are known. Contamination may come from the interior of the udder, from the animal, from the utensils, from the milker and from the surrounding air.

The producer must carefully study and practice methods which will eliminate contamination at its source; and having learned the use of proper methods diligently strive to maintain a high standard. The production of clean milk for the most part is dependent on clean habits and attitude.

I might say here that too much emphasis is placed on the use of the strainer. If the producer would strive to eliminate all dirt from the milk in the process of milking there would be less need for the strainer. Many recognize the strainer as a necessary evil which should be eliminated wherever possible. To over emphasize the value of the strainer tends to teach the producer to follow the line of least resistance.

It is unfortunate that many producers will not meet the sanitary requirements until pressure is brought to bear on them. When conditions at the farm are such that clean milk cannot be produced at all times the source of supply must be excluded from the market. This is probably the most efficient but surely not the most satisfactory way of compelling producers promptly to comply with the requirements. The distributor realizes that the temporary loss of market means financial loss to the producer and for that reason does not wish to go to extremes to get cooperation unless compelled to do so.

Some patrons are antagonistic because they have to meet sanitary requirements and they place the responsibility for the imposition of those requirements wholly on the distributor when in fact the requirements have been imposed by boards of health and by the demands of the consumer. In the Philadelphia milk shed the producers through the Philadelphia Inter-State Dairy Council co-operating with the dealers have drawn up a self imposed set of regulations and are helping in their enforcement.

The distributor is the producer's agent, obligated to dispose of his product to the best advantage to both parties. The distributor is handicapped when he attempts to sell an inferior product. Any reduction in price made necessary by curtailed sales due to low grade products reflects itself in profits. A high grade product will create a demand for itself and since increased demand is usually accompanied by a corresponding increase in price the effort put forth by the producer receives its reward in higher returns.

There is satisfaction in knowing that one has done his utmost to produce the best article possible with the equipment at hand under the existing conditions.

(Continued on page 14)

Master Farmers Awarded Gold Medals

The "Pennsylvania Farmer" has initiated a new movement for Pennsylvania, New Jersey, Delaware and Maryland, but one which has received wide attention in the central-west. This is called the Master Farmer Movement. Through it, farmers who are recognized as successful in their undertakings and are men of leadership are selected by impartial judges and publicly recognized because of their accomplishments.

On Thursday, January 19, 1928, the "Pennsylvania Farmer" entertained at a dinner at the Penn Harris Hotel, Harrisburg, approximately 100 representative agriculturists, at which dinner the awards for 1928 for this district were announced.

R. P. Kester, Editor "Pennsylvania Farmer", as Master of Ceremonies, opened the meeting and explained the history and nature of the Master Farmers' Movement. He stated the purpose of the movement in the words of Clifford V. Gregory, Editor of *Prairie Farmer*, Chicago, Ill., who initiated this movement in this country: "The purpose of the Master Farmer movement is to recognize outstanding success in farming and rural citizenship. The Nation should honor its leading farmers as it does its scientists and its soldiers and its captains of industry. It is an inspiration to the boys and girls who are growing up in the country to know that success may be the reward of effort on the farm as it is in the city—not only success that is measured in money, but what is more important, the success that comes from an upright and useful life in family and community."

Twenty-one states now have a Master Farmer Association with a total of approximately 230 Master Farmers.

There are three considerations in selecting a Master Farmer. First, that he be a successful, efficient farmer and able to make a good living for his family; second, that he be a model husband and father; and third, that he be a good citizen fulfilling his obligation toward the Church and the State.

Mr. Kester emphasized the fact that a Master Farmer was selected, not because he had been singularly successful along one line of endeavor, as for instance, potato growing or egg production or high records for his cows, but because of the fact that he was an all round success; and, therefore, a Master Farmer award was to his mind a higher one than that of being the best dairyman or the best potato grower in the district.

Each Master Farmer is outstanding not by comparison with his forefathers but as compared with others of his own day and under similar conditions. It is too bad that the outstanding farm leaders of previous generations have gone to their graves unhonored and unsung and that, at the time, no one recognized what each one had accomplished and the things for which he stood.

C. L. White, Associate Editor of the "Pennsylvania Farmer", then outlined the method by which the Master Farmers were selected. He stated that two hundred nominations had been made through inquiries sent throughout all counties in Pennsylvania, New Jersey, Delaware, and Maryland. The situation with respect to all the nominees was thoroughly investigated, and recognized business men and officials, including judges some were specialists, some were general farmers,—some had large farms and some were successful small farmers.

In checking with respect to conditions on their various farms and activities of these farmers, there was a strikingly uniform record. All the homes of all the twelve had electricity, running water and what are known in this country as all modern conveniences. All were recognized members of the church; all were connected with county agriculture extension associations, six being officers of such associations. Many of them were connected with the Grange; one was Master of his State Grange. They were all interested in cooperative marketing.

As to the start in life of these men, it was evident that they were what would be termed "self-made men". Five were officers of local banks; some were bank presidents. All were sufficiently successful so that they could include some relaxation in their program, for themselves and their families. For instance, all of them were men who enjoyed taking and did take vacations through traveling or other relaxation.

Mr. White then called up each one of the twelve men in alphabetical order and presented each one with a gold medal as

a recognition of his election as a Master Farmer.

It will be noted that of the following list one was selected representing the Maryland-Delaware territory, two representing New Jersey territory, and the others Pennsylvania. One of these is well known to Inter-state Milk Producers' Association members as the treasurer of the organization, Robt. F. Brinton, West Chester. Another, Eugene Stapler, Bucks County, Yardley, Pa., has always been active in Inter-State work in his home county and a regular attendant at all of its Annual Meetings; H. H. Snively, Willow Street, Lancaster County, while not an active milk shipper, has always been very much interested in Inter-State affairs in Lancaster County, as has also J. Clayton Brubaker of Lititz.

The Master Farmers

Frank C. Bancroft . . . Kent Co., Delaware
A fruit grower; 125 acres in apples. Has a purebred Jersey herd. Master of Delaware State Grange. Interested in cold storage warehouse and local bank. Member of horticultural societies of several states, likewise the National Horticultural Society.

Robert F. Brinton . . . Chester Co., Pa.
Graduate of West Chester State Normal School. Took a short course at Pennsylvania State College. Purebred Holsteins. Interested in Fruit Growers Association and local packing company. Treasurer of Inter-State Milk Producers' Association. Secretary of the Pennsylvania Dairymen's Association. Treasurer Chester County Agricultural Extension Association. Home remarkable for fine trees and splendidly chosen old fashioned furniture of the same period as the 100 year old house.

J. Clayton Brubaker . . . Lancaster Co., Pa.
Grown 566 bushels of potatoes per acre. Markets his crops directly and personally in nearby centers. Has been President of Lancaster County Agricultural Extension Association. President of Pennsylvania Farm Bureau Federation. Interested in Lititz Garden Club. Has unusual collection of choice evergreens around the home.

James E. Eastman . . . Bradford Co., Pa.
Sent two children to Pennsylvania State College. One now runs poultry plant on farm, one thousand hens, averaging 200 eggs. Has an unusually good dairy.

Fred E. Hess . . . Luzerne Co., Pa.
Has made a success at farming 65 acres with fruits and vegetables selling in nearby markets.

Jacob L. Pittenger, Monmouth Co., N. J.
Potato grower. During the war had 180 acres, now has 50 cows averaging 11,000 pounds of milk, 430 pounds of fat.

Charles B. Probasco . . . Mercer Co., N. J.
Potato specialist operating several farms on which the crop is grown. Last year the gross income of one farm was \$35,000.

John Schroppe . . . Schuylkill Co., Pa.
The champion potato grower of the state in 1920. In five out of six years was in the 400 bushel per acre potato club. Has large sideline of chickens.

H. H. Snively . . . Lancaster Co., Pa.
Importer of dairy cattle. Purebred Jersey herd averaging 10,000 pounds of 5% milk. Hampshire hogs. Largely responsible for the West Lampeter High School, one of the first vocational high schools in the state.

Eugene Stapler . . . Bucks Co., Pa.
Purebred Holsteins averaging 12,000 pounds of milk, 400 pounds of fat. Successful user of milking machine. Was largely responsible for the success of the neighborhood community house.

Frederick Taylor . . . Lawrence Co., Pa.
Specialist in certified milk. Marketing in three cities. Has ten head of Holsteins.

J. R. Ziesenheim . . . Erie Co., Pa.
Associated with father and grandfather in operating a farm which they specialized in vegetables, grapes, grain and beef. Eighty-five head of beeves in the barn at the present time. Last summer they marketed the products of 28 acres of grapes, 40 acres of potatoes and 7 acres of sweet corn. Graduate of Pennsylvania State College. Member of State Legislature. During the war, in the aviation corps.

Mrs. Gertrude Stewart of the "Pennsylvania Farmer" then introduced the wives of these gentlemen and told of the contribution each had made toward the farming enterprises. She stated that the Master Farmers had organized with the election of Frank L. Bancroft as President, and Robert F. Brinton as Secretary. The ladies had organized with Mrs. Robert F. Brinton, President, and Mrs. Frederick Taylor, Secretary.

Pennsylvania Leads in Ice Cream Production and Consumption

"Pennsylvania leads all states in both ice cream production and per capita consumption," said Fred Rasmussen, former Secretary of Agriculture for Pennsylvania and now executive secretary of the International Association of Ice Cream Manufacturers, in an address at the annual meeting of the Pennsylvania Association of Dairy and Milk Inspectors at the State Farm Products Show.

"Today Pennsylvania manufactures over 50,000,000 gallons of ice cream annually, which represents one-seventh

of the total production in the United States. Likewise, the per capita consumption of ice cream in this State is five gallons compared to slightly less than three gallons for the entire country."

First Ice Cream Factory

Mr. Rasmussen referred to the interesting fact that Pennsylvania was the first State to have an ice cream factory. This factory was located at Seven Valleys, York County, and started making ice cream in 1852.

From this small beginning, ice cream

manufacturing has developed into an industry in the United States with a total of 4500 factories, representing an investment of approximately \$450,000,000. The annual production of ice cream has increased from about 100,000,000 gallons in 1910 to over 322,000,000 gallons in 1926.

Milk Products From 1,000,000 Cows

"To supply the milk products for this favorite national dish requires the milk from 1,000,000 cows," according to Mr. Rasmussen. "In order to handle this food product in a sanitary way, ice

cream manufacturers have spent thousands of dollars in modern machinery. The product is not touched by the operators as it journeys through the receiving, mixing, pasteurizing, freezing and packaging departments. Trained men, generally graduates of the dairy schools of State agricultural colleges, supervise the production departments."

In referring to the value of ice cream as a food, it was pointed out that ice cream contains all the nutritive elements of food in its finest form from all the vitamins found in milk.

INTER-STATE MILK PRODUCERS' REVIEW

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The tenth annual Pennsylvania Farm Products Show, held at Harrisburg last month strongly emphasizes the fact that more adequate housing facilities for this great midwinter farm show are needed.

Not alone has this been true as far as exhibition space is concerned but better facilities for housing the many state farm organization meetings, such as are held at the time of the show.

The show has grown in ten years from one of 10,000 square feet of exhibit space to one of 130,000 square feet and at that, demands for 10,000 more square feet of space had to be refused prospective exhibitors.

From the standpoint of attendance, this show has gone forward by leaps and bounds with a total attendance of 60,000 last year, it is estimated that the total for 1928 will be fully 75,000.

This Pennsylvania Farm Products Show is most unique in character. It is the leader in its class and to insure its future success some determined effort must be made toward increased facilities.

This is a problem for its new Pennsylvania State Farm Products Show Commission, which has already shown efforts toward a definite forward movement.

Without any doubt, every farmer in the state should be willing to lend his best efforts toward any constructive plan looking toward a bigger and better show, with reasonable facilities available to exhibit farm products, equipment and machinery which make this great show of interest every year.

Probably no greater contest for honors in the production of milk of the highest quality for market consumption, has ever been held than that shown at the Milk Exhibit, in connection with the 12th Annual Farm Products Show in Harrisburg last month.

The interest in this contest has been growing steadily, year after year and at this show reached a total of 183 samples.

Philadelphia Milk Shed and the winner of the highest prize, Roy Peterson, Franklinville, Pa., was the secretary of a local unit of the Inter-State Milk Producers Association and most of these milk samples were made without extraordinary effort. Ordinary care in production, ordinary care in handling and ordinary care in transportation. That the cows themselves were right, is without question.

Of the total number of samples shown, 122 made scores of 96 per cent or better, an illustration of what can be done if the producer is so inclined.

Stop, Get Out,

Look and Listen
We have one question settled, at all events—at a railroad crossing it is exclusively up to us to see that we are not run over. We are to remember that we must stop for the train, not the train for us. If necessary, we must get out and look, or else take the consequences.

The Supreme Court settled the matter, after about 100 years of railroading, which is not any too soon, one would think.

As far as the decision relieves the courts of fraudulent damage suits, it is all right. If it also retards the removal of dangerous grade-crossings, we are not so sure.—Editorial in December "Farm Journal".

Report of the Field and Test Department Inter-State Milk Producers' Association.

The following statistics show the aggregate operations of all the Inter-State Milk Producers' Association field men in connection with testing, weighing and general membership work, for the month of December, 1927.

No. Tests Made 7431
No. Plants Investigated... 60
No. Membership Calls... 448
No. New Members
Signed 116
No. Cows Signed 611
No. Transfers Made 29
No. Meetings Attended... 13
No. Attending Meetings... 533

Holstein-Friesian

Association Officers

Albert Craig, Jr., Sewickley, was re-elected president of the Pennsylvania Federation of Holstein-Friesian Clubs at the annual meeting held in Harrisburg, on January 19th. Garfield Kerrick, Towanda, was re-elected vice president and H. E. Robertson, York, was again chosen secretary-treasurer.

Reports at the meeting showed the best year the Association has ever had. It was decided to continue the present program of expansion. Seventy-five breeders attended the meeting.

Potato Growers

Elect Officers

The Pennsylvania Potato Growers Association elected the following officers on January 19th at a meeting held during Farm Products Show Week: president, R. W. Lohr, Boswell, re-elected; vice president, Jacob S. Wile, Souderton; secretary-treasurer, Miles Horst, Lebanon, re-elected; assistant secretary-treasurer, Lloyd Denniston, Pennsylvania State College.

Market Conditions

H. D. ALLEBACH

The market during January remained in about the same general condition as has prevailed during October, November and December, 1927.

In checking on the production during the last three months of the past year we find that the farmers have increased their production over that of 1926 by about twenty-five per cent.

This situation has put the market in a serious condition. In other words it has resulted in a large surplus.

The same relative excess of production has continued through January, and if anything, has been more serious.

Consumption has been decreasing particularly in the labor sections. Labor on the whole is less actively engaged, and this alone has a very serious effect on the consumption of milk.

This increase in surplus milk must be promptly taken care of. If it is not done the market will soon be out of hand.

I find that the price of fat cattle is the highest that we have had for a very long period, and it might be good policy for the members of our organization to embrace the opportunity to get rid of their "boarder cows". Prompt action along this line may save the situation. It might reduce the production from five to ten quarts per farm per day, and would materially result in placing the market in a healthy condition.

But remember this—when you do dispose of this "boarder cow", do not buy a fresh cow in her place. Replacements at this time will not help the situation.

No farmer should, from the standpoint of economical production, keep "boarder cows", particularly with feed prices at the present high level.

At this time the greatest surplus appears to be in the Philadelphia market. Some of the smaller markets are not, however, suffering from a great excess of milk.

January Milk Prices

Grade B market milk, three per cent butter fat content (basic quantity average), delivered f. o. b. Philadelphia, during January is quoted at \$3.29 per hundred pounds.

The price of basic milk (basic quantity average) three per cent butterfat content, delivered at Receiving Stations in the 51-60 mile zone, during December,

is quoted at \$2.71 per hundred pounds. The usual butter fat differentials and freight rate variations applying at other mileage points in the territory, are shown by quotations on page 5, of this issue of the Milk Producers' Review.

The price of Class I surplus milk, for January, three per cent butter fat content, at all Receiving Stations, is \$1.94 per hundred pounds. For f. o. b. Philadelphia delivery the price for Class I surplus milk is quoted at \$2.52 per hundred pounds or 5.4 cents per quart.

The price of Class II surplus milk, for January, three per cent butter fat content, at all Receiving Stations, is \$1.54 per hundred pounds. For f. o. b. Philadelphia delivery the price of Class II surplus milk is quoted at \$2.12 per hundred pounds or 4.55 cents per quart.

January Butter Market

The statistical situation has had a marked influence on the price of butter during the month. On January first figures showed a total of 46,308,000 pounds, as compared to 34,347,000 pounds one year ago. This represents an increase of 11,961,000 pounds, as compared to a decrease of 18,438,000 pounds a year ago. Offerings of foreign butter have also increased materially, and have had an important bearing on the situation. Two cargoes alone aggregated a total of 1,127,840 pounds, arrived during the month. One half of this butter was placed in storage and in bonded warehouses because at the current price no margin of profit appeared available.

On the other hand domestic butter consumption continues on a very satisfactory basis and it is believed that the general market will readjust itself in the near future.

During January butter prices made a steady decline in instances as much as 13 cents per pound. The month opened with 92 score solid pack butter, New York City, quoted at 52 cents—within a week the price dropped to 50 cents, by mid month 49 cents ruled; then followed an irregular decrease which touched 47 cents near the close of the month. A slight reaction of 1 cent followed during the closing days.

The average price of 92 score, solid packed butter, New York City, on which the January surplus price was computed, was .5034 cents, as compared to .5180 cents for the month of December.

REMOVAL

The Inter-State Milk Producers' Association, Inc.

and the

Philadelphia Inter-State Dairy Council

HAVE REMOVED THEIR OFFICES TO

THE FLINT BUILDING

219 North Broad Street

Philadelphia, Pa.

LATEST MARKET CONDITIONS

PHILADELPHIA SELLING PLAN

The basic price, quoted below for January, 1928, is to be paid by cooperating dealers on the average basic quantity established by each producer. For all milk bought in excess of the basic amount, the surplus prices, quoted below for the month of January, are to be paid.

Surplus milk will be paid for under two classifications. Class I, represented by the amount of milk in excess of the basic average and equal to it in amount, which will be paid for by cooperating dealers on the basis of 92 score butter, solid pack, New York City, plus 20 per cent and Class II surplus represented by milk shipped in excess of the first surplus amount, which will be paid for on a flat average 92 score butter price for the month. The following quotations are based on 3 per cent butterfat content milk and a differential of 4 cents for each tenth point and 2 cents for each half tenth point, up or down, and are for all railroad points. (Inland stations carry differentials subject to local arrangements.)

INTER-STATE MILK PRODUCERS' ASSOCIATION PRICES

This price list is issued with the understanding that it is net to the producers and that all buyers using it as a basis of payment to producers, shall in addition thereto make the following contributions and payments:

(1) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk purchased from any producer at price listed herein.

(2) To the Inter-State Milk Producers' Association 2c per 100 pounds (46½ quarts) of all milk bought from members of said Association.

(3) To the Philadelphia Inter-State Dairy Council 2c per 100 pounds (46½ quarts) of all milk bought from other producers.

The funds so derived are to be used by the recipients for improving standards of quality in production and distribution of milk in the Philadelphia Milk Shed; for improvement and stabilization of markets and for an educational campaign advertising the food value of dairy products.

BASIC PRICE

January

F. O. B. Philadelphia

GRADE B MARKET MILK

Test per cent.	Per 100 lbs.	Price per qt.
3.05	\$3.29	7.1
3.1	3.31	7.15
3.15	3.35	7.25
3.2	3.39	7.3
3.25	3.43	7.35
3.3	3.47	7.4
3.35	3.51	7.45
3.4	3.55	7.5
3.45	3.59	7.55
3.5	3.63	7.6
3.55	3.67	7.65
3.6	3.71	7.7
3.65	3.75	7.75
3.7	3.79	7.8
3.75	3.83	7.85
3.8	3.87	7.9
3.85	3.91	7.95
3.9	3.95	8
3.95	4.0	8.05
4	4.04	8.1
4.05	4.08	8.15
4.1	4.12	8.2
4.15	4.16	8.25
4.2	4.2	8.3
4.25	4.24	8.35
4.3	4.28	8.4
4.35	4.32	8.45
4.4	4.36	8.5
4.45	4.4	8.55
4.5	4.44	8.6
4.55	4.48	8.65
4.6	4.52	8.7
4.65	4.56	8.75
4.7	4.6	8.8
4.75	4.64	8.85
4.8	4.68	8.9
4.85	4.72	8.95
4.9	4.76	9
4.95	4.8	9.05
5	4.84	9.1

When milk is not tested, the price f. o. b. Philadelphia is 8 cents per quart.

JANUARY SURPLUS PRICES

F. O. B. Philadelphia

Test per cent.	Per 100 lbs.	Class I	Class II
3.05	\$2.52	2.2	2.2
3.1	2.54	2.24	2.24
3.15	2.56	2.28	2.28
3.2	2.58	2.32	2.32
3.25	2.6	2.36	2.36
3.3	2.62	2.4	2.4
3.35	2.64	2.44	2.44
3.4	2.66	2.48	2.48
3.45	2.68	2.52	2.52
3.5	2.7	2.56	2.56
3.55	2.72	2.6	2.6
3.6	2.74	2.64	2.64
3.65	2.76	2.68	2.68
3.7	2.78	2.72	2.72
3.75	2.8	2.76	2.76
3.8	2.82	2.8	2.8
3.85	2.84	2.84	2.84
3.9	2.86	2.88	2.88
3.95	2.88	2.92	2.92
4	2.9	2.96	2.96
4.05	2.92	3	3
4.1	2.94	3.04	3.04
4.15	2.96	3.08	3.08
4.2	2.98	3.12	3.12
4.25	3.0	3.16	3.16
4.3	3.02	3.2	3.2
4.35	3.04	3.24	3.24
4.4	3.06	3.28	3.28
4.45	3.08	3.32	3.32
4.5	3.1	3.36	3.36
4.55	3.12	3.4	3.4
4.6	3.14	3.44	3.44
4.65	3.16	3.48	3.48
4.7	3.18	3.52	3.52
4.75	3.2	3.56	3.56
4.8	3.22	3.6	3.6
4.85	3.24	3.64	3.64
4.9	3.26	3.68	3.68
4.95	3.28	3.72	3.72
5	3.3	3.76	3.76

MONTHLY SURPLUS PRICES

4% at all Receiving Stations

1927	1928	1927	1928
January	2.37	January	2.37
February	2.43	February	2.43
March	2.36	March	2.36
April	2.43	April	2.43
May	2.07	May	2.07
June	2.01	June	2.01
July	1.98	July	1.98
August	1.97	August	1.97
September	2.34	September	2.34
October	2.46	October	2.46
November	2.46	November	2.46
December	2.46	December	2.46
1928	2.34	1928	2.34

BASIC PRICE

January

Grade B Market Milk

Quotations are at railroad points.

Prices are less freight and receiving station charges.

Freight Rates

100 lbs.

3% milk

Price

\$2.79

1 to 10 incl.

2.79

11 to 20 "

2.79

21 to 30 "

2.79

31 to 40 "

2.79

41 to 50 "

2.79

51 to 60 "

2.79

61 to 70 "

2.79

71 to 80 "

2.79

81 to 90 "

2.79

91 to 100 "

2.79

101 to 110 "

2.79

111 to 120 "

2.79

121 to 130 "

2.79

131 to 140 "

2.79

141 to 150 "

2.79

151 to 160 "

2.79

161 to 170 "

2.79

171 to 180 "

2.79

181 to 190 "

2.79

191 to 200 "

2.79

201 to 210 "

2.79

211 to 220 "

2.79

221 to 230 "

2.79

231 to 240 "

2.79

241 to 250 "

2.79



GOOD COWS—GOOD CARE

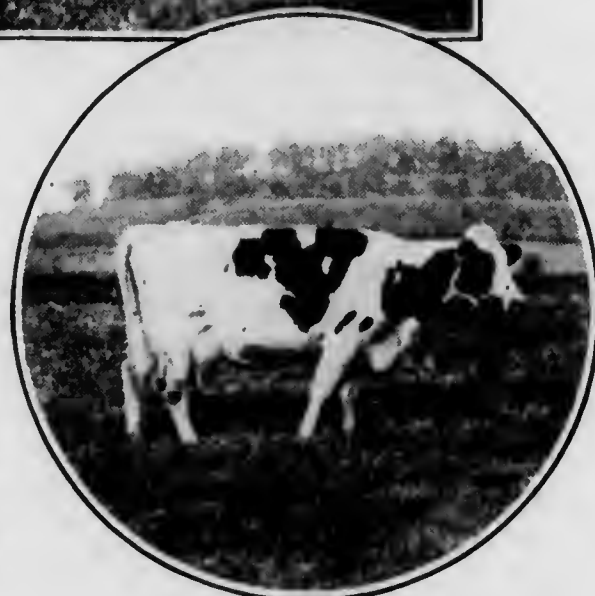
GOOD FEED (Amco Mixed)

made these records



Herd Average
12,449 Lbs. Milk

John L. Wise of Harmony, Pa., feeds his herd AMCO 24% DAIRY throughout the year, with good hay, silage, and pasture. Eight cows on which he kept complete yearly Cow Test records produced last year an average per cow of 12,449 lbs. Milk, and 419 lbs. Butter Fat, making an average income over feed cost of \$220.07. The cow in the circle produced 14,224 lbs. Milk, 447 lbs. Butter Fat, and made \$281.37 over feed costs.



Herd Average
Over 10,000 Lbs. Milk

Fed a mixture of AMCO 24% UNIVERSAL and corn and cob meal, the herd owned by William R. Evans of Glen Mills, Pa., made an average yearly record per cow of over 10,000 lbs. of Milk in the local Cow Test Association. The cow in the center of the picture produced 18,000 lbs. of Milk.

AMCO

FEED MIXING SERVICE

AMERICAN MILLING COMPANY
EXECUTIVE OFFICES: PEORIA, ILL.
DIVISION OFFICE: MUNCY, PA.

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Peoria, Ill., Omaha, Nebr., Owensboro, Ky.
Alfalfa Plants at:
Powell, Garland, and Worland, Wyo.

Directors' Meeting

The regular bi-monthly meeting of the Board of Directors of the Inter-State Milk Producers' Association was held, by resolution adopted at its previous meeting, at Harrisburg, Pa., on January 17th, during the week of the Pennsylvania State Farm Products Show.

Those attending the meeting included H. D. Allebach, president; Frederick Shangle, vice president; R. W. Balderston, secretary; R. F. Brinton, treasurer, and the following directors: S. K. Andrews, J. H. Bennett, Ira J. Book, E. H. Donovan, E. Nelson James, J. W. Keith, H. I. Lauver, S. Blaine Lehman, A. R. Marvel, I. V. Otto, E. R. Pennington, J. A. Poorbaugh, C. F. Preston, Albert Sarig, C. C. Tallman, R. I. Tussey, H. B. Stewart, S. U. Troutman, F. M. Twining, F. P. Willits and A. B. Waddington.

The minutes of the preceeding meeting and those of the meetings held by the executive committee, since the last meeting of the Board, were presented and approved as was also the expenditures of the association, since its last meeting.

Formal reports of the secretary and of treasurer were presented and approved.

A detailed report of the proposed removal of the present offices, now in the Boyertown Building, to new offices on the 10th floor of the Flint Building, 219 N. Broad St., were presented by the committee and were approved by the Board.

H. D. Allebach, briefly referred to the general market conditions for fluid milk in the Philadelphia Milk Shed. There has been an increased flow and production on the whole appears to be larger than at any other time at this season of the year. With the open-winter season the volume of production is beginning to become serious. In some instances the greater volume, particularly in the higher grades of milk, such as A and AA has resulted in some downward price adjustments. At the time the prices paid for market or Grade B milk remain unchanged.

The general trend of reports from the directors indicate fairly satisfactory conditions, except in such districts as have been influenced by readjustments of bonuses, etc., in the higher grades.

Following a general discussion of fluid milk conditions in the Philadelphia Milk Shed, the meeting adjourned.

Better Buying Power for Agriculture

A study of the fundamentals develops some very interesting indications for the immediate future. The gains in volume and value of agricultural production in 1927 added not less than one-twelfth to the gross buying power of thirty millions of people. This buying power is just now beginning to be exercised and will continue to be felt up to the harvest of 1928. A considerable reduction in farm loans has been accomplished during recent months, and the American farmer will pay \$25,000,000 or \$30,000,000 less in interest on his borrowings than he has paid during the current year, thus making a further addition to his net buying power.

Give Cows Salt

Salt is needed by all animals that eat vegetable and plant food. The average requirements for cows is about three-fourths of an ounce a day per 1000 pounds live weight and a similar amount for each 20 pounds of milk produced.

New Jersey Farm

Products Show

The 1928 New Jersey Farm Products Show was one of the most outstanding exhibitions as well as one of the most important, from the standpoint of organized agriculture, that has ever been held.

The show was held in the Armory Building, Trenton, N. J., January 10th to 13th inclusive, and was under the direction of the New Jersey State Department of Agriculture.

The exhibition in itself was of an exceptional character and occupied the floor space of the armory to its full capacity. The interest of the farmers and of the general public was more pronounced than ever before and the attendance at the exhibits, as well as many of the various agricultural meetings, held during the week of the show was far in excess of last year.

Farm Products Show

The general plan of exhibit spaces, decorations, etc., was attractive and well laid out. The exhibits were well balanced and presented a most attractive general appearance.

Among the outstanding displays were those of general farm machinery and equipment. They were the best that the Show has ever had.

The New Jersey Department of Agriculture presented an interesting display, in which there were featured, hay, seed and soil development, quality egg production, standardization of farm products, conservation of forestry, Japanese Beetle statistics, bee inspections, tuberculin testing program, marketing news statistics, etc. State Highway Department, Police and Public Library Service also presented interesting exhibits.

The egg and baby chick exhibits were most interesting and as a part of these exhibits demonstrations of certification of eggs and baby chicks were demonstrated. There were also good exhibits of potatoes, apples and corn.

The various dairy breed organizations, the New Jersey Guernsey Breeders Association, the Holstein Friesian Co-operative Association and the Jersey Cattle Association of New Jersey were among the exhibitors as was also the Philadelphia Inter-State Dairy Council.

Many Meetings Held

At the dairymen's banquet, held on Thursday evening, awards of ribbons were made to four Mercer County farmers for cow testing association work during 1927. They went to Charles Burd, Pleasant Valley, with a fat average of 368 pounds; William H. Hamilton, Harborton, with 362 pounds; Joseph W. Miller, Princeton, with 349 pounds and State Senator, A. C. Reeves, Lawrenceville, with a 346 pound average.

Among the other state-wide meetings that were held during the show week were those of the New Jersey Federation of County Boards of Agriculture; New Jersey State Poultry Association; New Jersey State Potato Association; New Jersey Alfalfa Association; Holstein Friesian Cooperative Association of New Jersey; New Jersey Guernsey Breeders' Association, Inc.; Jersey Cattle Association of New Jersey; New Jersey Dairy-men; Farmers' Roadside Market Association of New Jersey; New Jersey Home Bureau; New Jersey Beekeeper's Association; New Jersey State Horticultural Society; New Jersey Swine Growers, Vocational Teachers' Conference; and the New Jersey Federation of Town and County Church Workers.

Pennsylvania Farm

Products Show

(Continued from page 1)

an outstanding dairyman, with herds of many years state and national records; Amos Eberly, of Lancaster County, who grew 651 bushels of potatoes per acre in 1927 and John Toivonor, of Erie County, an outstanding poultryman of this state.

Interesting addresses were made by R. L. Watts, Denn, School of Agriculture, Pennsylvania State College; John A. H. Keith, Superintendent of Public Instruction; Dr. Ralph D. Hetzel, President of Pennsylvania State College, and Hon. John S. Fisher, Governor of the Commonwealth.

During the meetings vocal selections were rendered by a quartet from the State College Glee Club.

Group Meetings

In no previous year has the attendance and interest in the group meetings, held during the Farm Products Show Week, been as large as at this year's session.

The attendance at the Pennsylvania Potato Growers Meeting was reported as being 1200. At the meeting of the Pennsylvania State Poultry and Baby Chick Association there was an attendance of upwards of 1,000, while the Pennsylvania Dairymen's Association had an average attendance of nearly 300.

At these meetings various problems incident to the production of the various farm products were presented and discussed.

The various organizations holding meetings during the Farm Products Show Week include:

Meeting of Young Farmers.

Meeting of members of former State Board of Agriculture and Institute Lecturers.

Society of Farm Women of Pennsylvania.

Pennsylvania Livestock Breeders' Association.

Pennsylvania Berkshire Breeders Association.

Pennsylvania Chester White Breeders Association.

Pennsylvania Duroc Jersey Breeders Association.

Pennsylvania Poland China Breeders Association.

Pennsylvania Sheep Breeders and Wool Growers Association.

Pennsylvania Dairymen's Association.

Penna. Ayreshire Breeders Association.

Pennsylvania Guernsey Breeders.

Pennsylvania Federation of Holstein Friesian Clubs.

Pennsylvania Jersey Cattle Club.

Pennsylvania Hereford Breeders Association.

State Horticultural Association of Pennsylvania.

Pennsylvania State Vegetable Growers' Association.

Entomological Society of Penna.

Penna. Potato Growers Association.

Penna. State Poultry Association.

Annual Convention National Pigeon Show.

Pennsylvania Beekeepers Association.

State Council of Agricultural Associations of Pennsylvania.

Pennsylvania Farmers Cooperative Federation, Inc.

Pennsylvania Farm Bureau Federation.

Pennsylvania State Association of Markets.

Pennsylvania Association of Dairy and Milk Inspectors.

Penna. Threshermen Association.

Vocational Schools of Pennsylvania.

Boys and Girls Club Work.

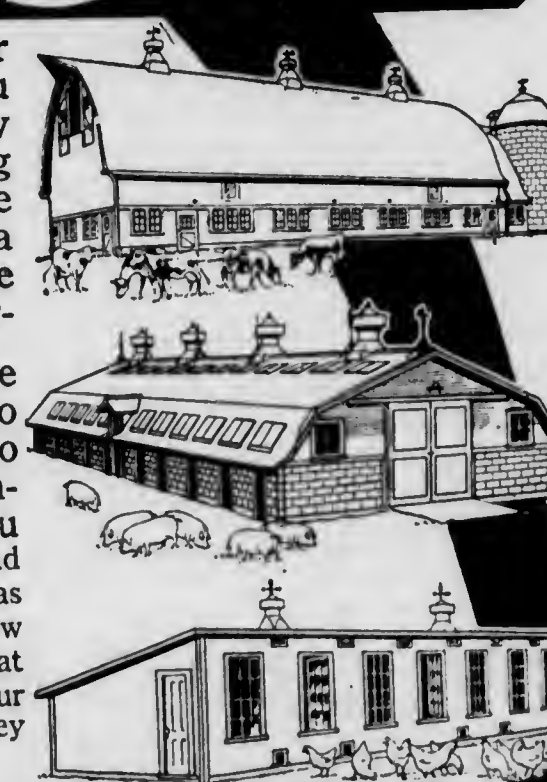
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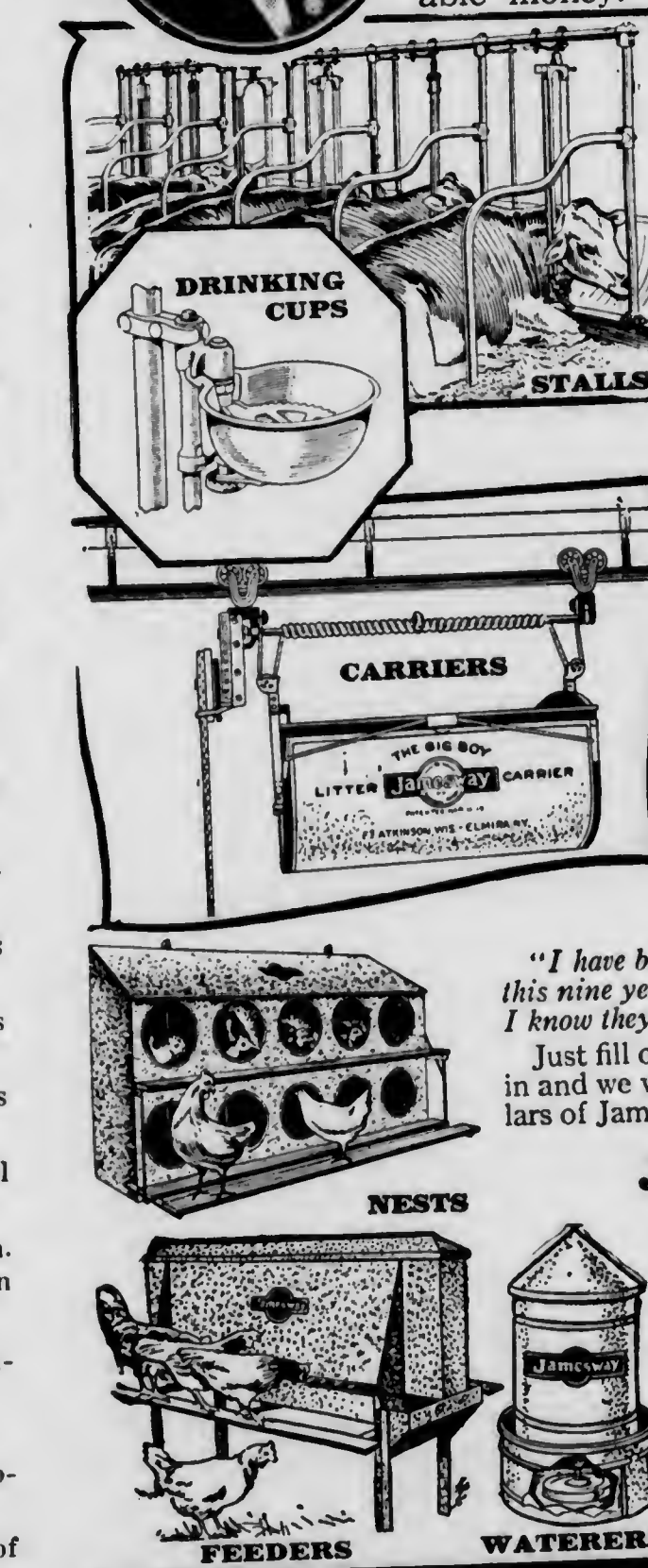
which tells all about this Jamesway Service. This book also illustrates and describes Jamesway labor-saving and money-making equipment; Stalls, Stanchions, Drinking Cups, Litter Carriers, etc., for the Cow Barn—Troughs, Waterers, etc., for Hog Houses and Feeders, Waterers, Nests, Incubators, Brooders for the Poultry House.

Jamesway Equipment for Cow Barns, Hog Houses and Poultry Houses is the most economical you can buy—it is the most economical because it is the BEST—it lasts longer—does the work better—saves you time and labor and provides comfort for your animals.

Read this letter from Fred Warnberg, Rush City, Minnesota:

"I have been using Jamesway Equipment for nine years. During this nine years of service they have done all I expected of them and I know they will be here for nine years more."

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Purebred Dairy Sires are Being Introduced by Various Methods

The purebred dairy sire is the greatest single factor in increasing the average production of dairy cows. This fact is generally recognized; yet 75 per cent of the dairy bulls in service in the United States are either grades or scrubs. Furthermore, according to the Bureau of Dairy Industry, United States Department of Agriculture, a survey of the 48 States has shown that those States or sections of States having the highest percentage of purebred dairy sires are also leading in average milk production.

Various plans to introduce purebred dairy sires are suggested by the department, such as county-wide and State-wide scrub-bull-eradication campaigns,

cooperative bull associations, bull clubs, better sire trains, and others.

A county-wide scrub-bull-eradication campaign is an organized effort within a county to inform every dairyman of the importance of breeding only to a good purebred bull and to make definite arrangements to replace inferior bulls with purebreds that are well grown, of good conformation, and from dams with high yearly milk and butterfat records.

The campaign is carried on in cooperation with the Extension Service of the State College of Agriculture. Considerable time and effort are required to organize such a campaign. At least three weeks should be allowed for a survey of the

bull population of the county and for organization of local committees to conduct the campaign. The circular describes the various steps to follow in planning and conducting the campaign. Suggested posters for advertising purposes as well as copy for business men's advertising are included.

When a majority of counties in a State are interested in better dairy-sire work it is often advisable to conduct a campaign on a State-wide basis.

Many suggestions of value and much interesting detail concerning scrub-bull-eradication work may be found in Circular No. 6-C, Purebred Dairy Sire Introduction.

GIBRALTAR WASH TANKS

The up-to-the-minute dairyman does not save money by buying cheap, low-grade cows and bulls—he is convinced that by getting only the best he is practicing real economy. Unfortunately, when it comes to equipment, he often forgets that principle and thinks he is saving money by purchasing poor-grade, inexpensive material. That is particularly true of metal wash tanks. A good metal tank can not be built cheaply. You are only fooling yourself when you think you are buying a good tank at a cheap price, and surely an article that is in such constant use as a wash tank should be the best obtainable—which is the GIBRALTAR.

BUY THE BEST — and SAVE MONEY

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Phone Rittenhouse 7232

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Vegetable, Flower, Grass and Grain Seeds. Garden and Farming Implements, Poultry and Dairy Supplies

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MARTIN C. RIBSAM & SONS CO.

143-5-7 East Front St. Free Parking Space Trenton, N. J.

Educational Entertainment

The Various Departments of the

Philadelphia Inter-State Dairy Council

are at your service and will assist you in planning Educational Entertainment for your Community, Local Membership Units, Schools, Granges and Farmers' Clubs

There are available for you, as far as our facilities will permit, Lectures, Speakers, Motion Picture Films, Lantern Slides and Special Health Promotion talks and Demonstrations as well as material that you can use yourselves.

This service is rendered free in districts where producers and distributors are cooperating in the Dairy Council Program.

Let Us Help You in Planning Your Entertainment

Write for Detailed Information
and Programs Available

Philadelphia Inter-State Dairy Council

R. W. BALDERSTON, Secretary

Flint Building, 29 N. Broad St. Philadelphia, Pa.

Pennsylvania Dairymen's Association

(Continued from page 1)

production as well as disseminating the knowledge to the public of the value of dairy products in the human diet.

"The Pennsylvania Dairymen's Association should and does function as a coordinating agency, through which the industry as a whole may speak. Its field is large and its officers and members desire that it render a real service to the producer, manufacturer, distributor and consumer of dairy products.

E. J. Perry, Extension Specialist in Dairying, New Jersey College of Agriculture, New Brunswick, New Jersey, made an interesting address on "Securing Maximum Milk Production at a Minimum Cost."

Dr. F. B. Morrison, Director, New York Agricultural Experiment Station, Geneva, New York, made an outstanding address on "The Use and Abuse of Protein in the Rations of Dairy Cattle."

Business Session

The business session of the Pennsylvania Dairymen's Association was held at 1:30 P. M., when the formal minutes of the meeting of the Second Annual Meeting and the Summer Meeting were read and approved.

Secretary-Treasurer Robert F. Brinton also presented a financial statement of the association for the past year, which was also approved.

A committee on Resolutions, composed of Robert W. Balderston, W. S. Wise and Miles Horst, presented the following resolutions which were approved.

1. The Pennsylvania State Dairymen's Association would commend the efforts of representative committees of various interested groups to secure through conference, and if need be by legislative enactment, a clarification of the situation with respect to state and local sanitary regulations governing the production and distribution of milk in Pennsylvania and would approve further effort in this line to be participated in by all interested parties.

2. The Pennsylvania State Dairymen's Association approves the efforts of the State Council of Agricultural Associations to secure wider distribution of electricity for light and power throughout our rural areas and urges that these efforts be continued through the Joint Rural Electric Committee appointed by the State Council of Agricultural Associations and the Pennsylvania State Electric Light Association to increase such use on farms. We feel that electricity is a particular valuable aid in relieving the drudgery and increasing the efficiency on dairy farms.

3. The Pennsylvania State Dairymen's Association would urge the Pennsylvania State College Experiment Station to continue, and, if possible, to enlarge the recently inaugurated program of research in dairy barn construction and ventilation.

4. The prevention, eradication, and cure of diseases of farm animals being of great and increasing importance both to our agricultural interests, and to the state at large, the Pennsylvania State Dairymen's Association would commend the efforts of the State Department of Agriculture to eradicate bovine tuberculosis, contagious abortion in cattle and other diseases. The Association would further urge research by appropriate bureaus of the State Department of Agriculture and the Pennsylvania State College in the matter of contagious abortion. It would recommend a con-

tinuance of at least the present rate of progress in bovine tuberculosis eradication in the state.

5. The Pennsylvania State Dairymen's Association approves of further research by the Pennsylvania State College and Experiment Station in the field of the production and distribution of dairy products, and of continued service by the Pennsylvania State Department of Agriculture and the United States Department of Agriculture in the field of dairy statistics.

6. The Pennsylvania State Dairymen's Association heartily supports the constitutional amendment to be voted on next fall providing for a state bond issue of \$8,000,000.00 for new buildings at Pennsylvania State College, and urges its members to aid in distributing information regarding the building situation at the College to the end that voters throughout the state may fully understand the importance of the amendment.

The report of the committee on nominations for officers to serve for 1928 was presented by a committee composed of A. A. Borland, H. D. Allebach, H. S. Steele, and J. A. Poorbaugh.

The following report was submitted: President, E. B. Fitts, State College, Pa.; First Vice President; Dr. L. M. Thompson, Montrose, Pa.; Second Vice President, M. T. Phillips, Pomeroy, Pa.; Third Vice President, W. F. Shrum, Jeannette, Pa.; Secretary-Treasurer, Robert F. Brinton, West Chester, Pa. There being no further nominations the officers named were duly elected.

Addresses during the afternoon session were presented by H. D. Davis, Production Manager, Supplee-Wills-Jones Milk Co., Philadelphia, Pa. (This address is printed elsewhere in this issue of the Milk Producers' Review.)

Dr. E. S. Deubler, Superintendent, Pennhurst Farms, Narbeth, Pa., presented an address on "A Practical Plan of Ridding the Herd of Contagious Abortion."

Dr. F. B. Morrison, Director, New York Agricultural Experiment Station, Geneva, N. Y., made an interesting address on the subject of "Should Minerals be Added to Dairy Rations", while J. H. McClain, Bureau of Dairy Industry, U. S. Department of Agriculture, Washington, D. C., addressed the meeting on "Dairy Herd Improvement Through the Sire."

Annual Banquet

The annual banquet of the association was held in the Masonic Temple, Wednesday Evening, with full 500 participating. Professor E. B. Fitts acted as toastmaster.

Following the banquet addresses were made by Dr. C. G. Jordan, Secretary of Agriculture for Pennsylvania. Dr. Jordan in a direct statement regarding the development of the state's program for the eradication of tuberculosis and contagious abortion in cattle, said:

"Sanitary conditions demand clean milk. Disease in cows lessens their production to a material extent and the producer faces this loss.

"It will not be long before most of the dairy cows, in Pennsylvania will be on the tuberculosis free list. Seventy-five per cent are now on a basis of less than 5 per cent free. We are marching forward rapidly and it will not be long before all the milk in Pennsylvania will come from tuberculin tested cows.

(Continued on page 12)

COW TESTING ASSOCIATION AWARDS

A List of Association Members in the Inter-State M. P. Association Territory With Herds Averaging Five or More Cows, Which Exceeded the Goal of 300 Lbs. Butterfat Average During 1927

Herds Averaging 400 Pounds or More				
Owner	Address	Lbs. Milk	Lbs. Fat	County
Paul C. Gible	Mechanicsburg, R. D. 6	13946	457.1	Cumberland
Jesse E. Kurtz	Carlisle, R. D. 8	13413	452.6	Cumberland
Allen Eshelman	Everett No. 4	8841	442.9	Bedford
E. J. Cunningham & Son	Millintown	12642	439.0	Junata
Ivo V. Otto	Carlisle, R. D. 6	12937	436.2	Cumberland
Wm. H. Landis	East Greenville	11994	428.9	Montgomery
D. A. Morrow	Tyrone, Pa.	8647	426.7	Blair
Sam M. Yoder	Allensville, Pa.	12339	420.7	Mifflin
J. B. Byler	Allensville, Pa.	11990	419.7	Mifflin
Abram N. Lehman	Carlisle, R. D. 2	12108	415.3	Cumberland
Webster Griffith	Ebensburg	8515	410.2	Cambria
John Doane	Powell, R. D. 1	9748	409.7	Bradford
J. Walter Rupp	Mechanicsburg, R. D. 5	11410	408.1	Cumberland
R. H. King	Belleville	12281	401.6	Mifflin

Herds Averaging 350 to 400 Pounds				
Owner	Address	Lbs. Milk	Lbs. Fat	County
John W. Burket	Tyrone	7996	397.5	Blair
Paul N. Lehman	Carlisle, R. D. 2	10364	392.4	Cumberland
M. A. Herber	Breinsville	11072	389.3	Cenhe
A. C. Hartle & Bros.	Belleville	11439	384.6	Centre
C. I. Degen & Son	Millintown	10836	383.7	Junata
B. R. Byler	Allensville	10030	377.0	Mifflin
Carl L. Smith	McAlisterville	10546	376.4	Junata
J. E. Ivins	Peasterville	10077	376.1	Bucks
T. R. Auker	Millintown	11636	374.2	Junata
Ursinus College	Collegeville	10834	374.0	Montgomery
A. P. Irvin	Chadds Ford	7741	373.0	Chester
E. Raymond Shugart	Carlisle, R. D. 9	10850	371.1	Cumberland
Geo. L. Snyder	Carlisle, R. D. 6	10983	369.8	Cumberland
Mrs. C. M. Schwab	Loretto	6767	369.8	Cambria
J. S. Murphy	Woodbine	11000	369.6	York
Wm. Morrow	Tyrone	7117	367.0	Blair
George Morgart	Rainsburg	7136	365.4	Bedford
Theorous Kaufman	Millintown	11216	364.8	Junata
State Institution	Pennhurst	10330	364.8	Chester
W. M. Hunsberger	Plumsteadville	11053	364.0	Bucks
Harry Clark	Breezewood	6907	363.6	Bedford
J. W. Seiber	McAlisterville	10654	363.0	Junata
J. R. Showalter	Woodbine	9395	360.4	York
C. D. Stouffer	Port Royal	11132	360.2	Junata
H. Lyle Hess	Delta	7738	359.5	York
H. K. McCullough	Newville, R. D.	7868	358.6	Cumberland
C. E. Kuntz & Son	Lutzville	6601	357.8	Bedford
Elmer C. Ludt	Carlisle, R. D. 5	11167	355.9	Cumberland
Auburn Shale Brick Farm	Auburn	10127	355.2	Schuylkill
Clarence Funk	Kimberton	7375	354.5	Chester
Guy Reed	Summit Station, R. D.	10809	353.1	Schuylkill
C. E. Mather	West Chester	7453	352.7	Chester
E. D. Deckard	Newport	6784	352.4	Perry
Norman K. Beach	Parkesburg, R. D. 1	7069	352.3	Chester
J. H. Lear	Carlisle, R. D. 5	10442	351.4	Cumberland
Stanley Kuntz	Bedford, R. D. 4	6895	351.2	Bedford
Harry B. Shenk	Elverson	6802	350.4	Chester

Herds Averaging 300 to 350 Pounds				
Owner	Address	Lbs. Milk	Lbs. Fat	County
E. E. Beale	Port Royal	10257	349.2	Junata
C. W. Grubs	Orwigsburg, R. D. 1	8841	348.3	Schuylkill
M. L. Jones	Westtown	10064	347.4	Chester
E. H. Karlheim	Patton	6498	346.7	Cambria
Linfred Benner	Langhorne	9379	345.9	Bucks
C. A. Musser	Oakland Mills	9854	345.4	Junata
Webb Bros.	Fawn Grove	7417	345.0	York
Mrs. Mary N. Carter	Pocopson	9845	345.0	Chester
Karl A. Fettig	Millintown	9241	344.7	Junata
R. E. Neely	Muddy Creek Forks	8241	344.3	York
Claverach Farm	Downingtown	6563	343.2	Chester
U. K. Peachey	Belleville	10057	343.9	Mifflin
P. H. Harjes, Jr.	Valley Forge	7184	342.5	Chester
Levi Schultz Estate	Palm	9685	342.3	Montgomery
L. P. Satterthwaite	Newtown	10098	339.8	Bucks
William B. Rhoads	Oakbourne	9626	339.6	Chester
Wm. M. High	Phoenixville, R. D. 4	9894	339.0	Chester
Arthur H. High	Pottstown, R. D.	9624	338.4	Chester
K. S. Bagshaw	Holidaysburg	8085	337.4	Blair
John W. Raudabaugh	Carlisle, R. D. 7	10035	335.7	Cumberland
C. G. Niesley	Mechanicsburg, R. D. 1	9751	335.3	Cumberland
W. J. Karlheim	Patton	6559	334.6	Cambria
Jacob Yoder	Belleville	9087	332.7	Mifflin
A. T. Replogle	Woodbury No. 1	7384	332.5	Bedford
F. B. Sellers, Jr.	Carlisle	8425	331.8	Cumberland
John F. Nace	McAlisterville	6751	331.7	Junata
W. S. Grimm	Red Lion	10196	331.5	York
William S. Ker	Carlisle, R. D. 9	10012	330.8	Cumberland
Porter Farms	Phoenixville	6385	330.3	Chester
Warren G. Schultz	East Greenville	9269	329.3	Montgomery
Edman & Son	Elizabethville, R. D.	10015	329.0	Dauphin
J. I. Clarke	Port Royal	8746	328.6	Junata
Paul Koontz	Bedford No. 5	7100	328.2	Bedford
Mrs. Matilda Karlheim & Sons	Patton	6776	328.2	Cambria
Geo. S. Gehman	Coopersburg, R. D. 1	9121	327.9	Lehigh
C. L. Wilkinson	Rushland	9097	327.7	Bucks
C. H. Marshall	West Chester	8195	325.9	Chester
Abram E. Rider	Mechanicsburg, R. D. 5	9167	325.8	Cumberland
John Hershberger	Everett	6248	323.9	Bedford
Owen S. Gerhard	Palm	9313	323.8	Montgomery
Jos. Canby & Son	Hulmeville	9700	321.9	Bucks
W. I. Reeves	Marshallton	6689	321.9	Chester
John O. Wirt	McVeytown	8906	321.4	Mifflin
R. F. Brown	Mill Creek	9023	320.0	Mifflin

(Continued on page 13)

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BROOKHILL LABORATORIES, Genesee Depot, Wis., is a "super-dairy farm", producing certified milk averaging exceptionally low bacterial count, and is the world's largest producer of Acidophilus Milk. From 400 to 450 cows are milked daily at this "milk laboratory" — by Universal Milkers!

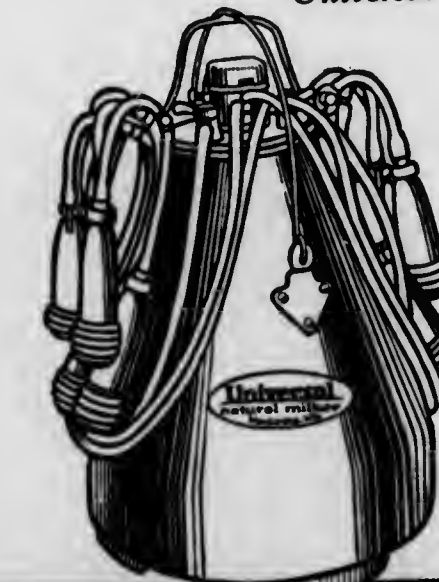
To do this job of particular milking properly—to maintain the exceptionally high standard of cleanliness required, at the same time holding down production costs—calls for milking equipment of high efficiency, maximum sanitation, and operating economy.

Universal Milkers meet these requirements!

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MILKS LIKE
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Universal
natural milker

The Agricultural Situation*

The Government reports that the total value of 55 crops raised in the United States in 1927 amounted to \$8,429,000,000 as compared with \$7,794,000,000 in 1926, an increase of \$635,000,000, or 8.1 per cent. The value of 10 of these 55 crops in 1927 represented nearly 85 per cent of the total value. Out of these 10 crops only cotton, oats and tobacco showed decreased yields as the following table shows:

Crop Yields			
	1927	1926	% Change
Corn, bushels	2,786,300,000	2,646,900,000	+ 5.3
Hay, tons	123,500,000	96,400,000	+28.1
Cotton, bales	12,800,000	18,000,000	-40.0
Wheat, bushels	871,600,000	832,800,000	+ 4.6
Oats, bushels	1,195,000,000	1,250,000,000	- 4.4
Potatoes, white, bushels	402,200,000	356,100,000	+12.9
Tobacco, lbs.	1,237,800,000	1,301,200,000	- 4.9
Sugar, bushels	265,600,000	188,300,000	+41.1
Sugar Beets, tons	7,700,000	7,200,000	+ 6.9
Rye, bushels	58,600,000	41,000,000	+42.9

Wheat and white potatoes were the only crops out of the 10 showing decreases in value, lower prices more than offsetting larger outputs. The increases in the prices of cotton, oats, and tobacco in 1927 over 1926 were sufficient to cause an increase in values despite smaller yields. The following table shows the values of these important crops in 1927 as compared with 1926:

Crop Values (Based on Farm Prices December 1)			
	1927 In Millions of Dollars	1926 In Millions of Dollars	% Change
Corn	\$2,015	\$1,729	+286
Hay	1,321	1,314	+ 7
Cotton	1,254	963	+ 271
Wheat	975	906	+ 77
Oats	537	497	+ 40
Potatoes (white)	388	501	- 113
Tobacco	266	237	+ 29
Barley	180	106	+ 74
Sugar Beets	60	55	+ 9.1
Rye	50	34	+ 47.1
45 Other Crops	1,383	1,342	+ 41
Total	\$8,429	\$7,794	+ \$635

*From Penna. Chamber of Commerce

When Answering Advertisements Mention The Milk Producers' Review



Farm Boys and Girls Celebrate Vocational Day in Pennsylvania

"Perhaps the most hopeful thing in rural and agricultural life is the splendid interest which so many young persons are taking in their job," was a press comment upon the meetings and contests staged during the Farm Products Show at Harrisburg last month, for the young farmers from forty-eight rural communities in Pennsylvania.

The program this year included project contest awards, continuous demonstration contests and a mass meeting arranged by Hon. R. G. Bressler, H. C. Fetteroff, and A. K. Baker.

Farm Projects

A world's record in pig raising was made by O. B. Savage of the Benton Vocational School, Columbia County.

Another young farmer raised 1224 bushels of potatoes on four and one-half acres of land.

Progressive agricultural methods were shown to be money-making ones as revealed in the net profits of some of the projects. One boy made \$280 profit on ten hogs; two boys reaping \$1060 an acre raising strawberries; another with a margin of \$113 from ten colonies of bees; \$574 from ninety-two chickens; \$103 from six sheep with a girl clearing \$605 from a half acre of vegetables.

A ninety foot exhibit devoted to Vocational Education featured many phases of new methods in agriculture, child care, and home economics.

Actual demonstrations took place continuously throughout the day, staged by thirty-one vocational schools. The boys demonstrations included the following: milk testing, electrifying a barn, chicken culling, canning, mixing of concrete, milk judging, balancing rations, care and repair of harness, scoring milk, and poultry diseases.

Among the girls' demonstrations were: block printing, serving ice cream, first aid, home canning, how to dress in good taste and getting acquainted with food-stuffs.

Boys' and Girls' Mass Meeting

A special program was arranged for the seven hundred and fifty farm boys and girls. The meeting was presided over by R. G. Bressler, Deputy Secretary of Agriculture, who introduced to the young people many outstanding agricultural figures of Pennsylvania. Among these were: Derr R. L. Watts, Pennsylvania School of Agriculture; Dr. C. G. Jordan, State Secretary of Agriculture; H. C. Fetteroff, Assistant State Director of Vocational Education; Arthur P. Williams, Regional Agent for the Federal Board for Vocational Education, Washington; R. W. Balderston, Board of Directors, Pennsylvania State College, and Secretary of the Philadelphia Inter-State Dairy Council; and Professor W. A. Broyles, Pennsylvania State College.

The Unionville Vocational School presented a special arrangement "The Masque of Beauty Through the Ages" under the direction of Del Rose Macan of the Philadelphia Inter-State Dairy Council.

She "Fixed Up" the Kitchen

How a farm woman improved her kitchen at small expense after entering a kitchen-improvement contest promoted by the extension service of the United States Department of Agriculture may have suggestions for other housewives. Her report is summarized as follows:

She lived on a rented farm when she decided to enter the county-wide kitchen contest for the three-month period. Here is a list of the things she did, and for which she received credit at the end of the contest: Installed a barrel water system; raised the height of tables and sink; brightened the kitchen by painting walls and woodwork a soft tan; painted the kitchen cabinet; laid linoleum; mended a broken window; put glass in upper half of kitchen door; enameled kitchen furniture; provided a drop shelf

for washtub, thus giving extra table space; put rollers on small table, wood box, and cabinet; repaired chimney and stove; placed springs on window; put shelves in closets and arranged drawers in order; made iceless refrigerator; rearranged equipment to save steps; painted back porch and used it for outdoor dining room in hot weather; made awning for porch from old canvas; upholstered settee for use on porch; arranged storage place for brooms, mops, clothespins, and clotheslines; made sanitary garbage pail from old bucket, and incinerator from heavy wire; replaced missing door knobs and locks; moved chickens away from house; planted flowers; and whitewashed liberally.

The expense for this overhauling was comparatively slight, as most of the materials used were available on the farm.



DAIRY COUNCIL TRAINS JEWISH GIRLS IN FOOD DEMONSTRATING. Two Jewish girls, trained by the Nutrition Department of the Dairy Council, are shown presenting a food demonstration before a group of several hundred foreign-born Jewish mothers of the Jewish Neighborhood House, Philadelphia. The religious ban against the use of meat and milk at the same meal results in a lack of dairy products in the Jewish diet. To correct this deficiency, the Dairy Council is urging the use of cheese substitutes for meat, with mid-morning and mid-afternoon lunches of milk for children.

U-m-m! Tasty Southern Cookery

Southern cookery has a flavor all its own, and these particular recipes have that special flavor.

Fried Chicken

Select a young chicken, cut up for frying. Rub thoroughly with salt. Roll in flour. Use a frying pan with lid. Melt about $\frac{1}{2}$ pound of butter. Brown chicken thoroughly on both sides, then lower heat and fry slowly until tender. Caution: Chicken must be cooked slowly.

Southern Milk Smothered Chicken

Select a young chicken, dress as for broiling. Rub thoroughly with salt. Sprinkle with flour. Place in an oven pan with two cups of milk. Cook slowly, basting frequently with the milk until the fowl is cooked and tender. Thicken the milk, remaining in the pan to use as gravy.

Scalloped Carrots and Celery

2 c. cooked cubed celery
2 c. cooked cubed carrots
 $\frac{1}{2}$ tsp. salt
 $\frac{1}{2}$ tsp. pepper
4 tbsp. butter
3 tbsp. flour
 $1\frac{1}{2}$ cups milk

The outer stalks of celery can be used; the inner pieces are best eaten raw. Place vegetables in a buttered baking dish. Season with salt, pepper, paprika and a grating of onion. Make a cream sauce of butter, flour and milk and pour over the vegetables. Cover with butter crumbs and bake in a moderate oven until browned.

Sally Lunn

2 c. scalded milk
4 rounded tbsp. butter
 $\frac{1}{2}$ tsp. salt
1 tsp. sugar
1 cake compressed yeast
About 5 cups sifted flour
2 eggs

To hot milk add butter, salt and sugar. When cooled to lukewarm, add crumbled yeast cake, stir until dissolved. Add sifted flour to make a thin drop batter. Add well-beaten eggs. Then add enough sifted flour to make a stiff dough. Put in a buttered cake pan that has a central funnel. Let rise until double its size. Bake 45 minutes in a moderate oven. If 2 yeast cakes are used, the time for rising is shortened. (A second rising will make the grain finer.)

Farm Women Meet in Harrisburg During Products Show

A two-day meeting of the Society of Farm Women of Pennsylvania was held in Harrisburg on January 18th and 19th in conjunction with the State Farm Products Show. During that time prominent representatives from state departments and educational circles met with the organization to discuss the problems of the farm and the farm women.

Among those appearing on the program were the following: W. K. Moffitt, Penna. State Chamber of Commerce; Mrs. Gertrude S. Stewart, Editor, Women's Department, "Pennsylvania Farmer"; Mrs. E. Grace McCauley, Secretary of Welfare; Hon. R. G. Bressler, Department of Agriculture and others.

Mrs. Gertrude S. Stewart, Editor, Women's Department, "Pennsylvania Farmer", urged her audience to play the part in their homes of not merely wives and mothers, but of friend-wives and friend-mothers. "It's a big job, and many fail at it," said Mrs. Stewart. She described, "the woman whose husband commuted daily to the city, who had every convenience, two children and an all-absorbing hobby,—the movies. During the morning she was a good housekeeper, and a mother; in the evening she was a good wife, but during the afternoon she put the children to bed, locked the door, and went to a movie. Not once a week, or twice a week, but six days of every week. This mother had failed in her job."

"There was also the case of the mother of eight children who went about the neighborhood borrowing cross-word puzzles 'to help kill time'."

"No woman, regardless of how isolated she may be, or of how little money there is in the family bank, can permit herself to shirk the task of friend-mother and friend-wife," said this speaker. "Show your interest in community projects. Visit the school your children attend at the lunch hour. Get ideas about packing lunches. Get in touch with the children's teachers, even if there is no Parent-Teachers Association. Fill your mind with beautiful thoughts."

"Do you ask why? A man who was being conducted through a large bakery in New York where he was shown large sunny windows, decorated walls, attractive working rooms for the employees, enquired 'Why all this beauty?' The reply made by the head of the concern was, 'Because it makes better bread'."

Dr. M. S. Benty, Superintendent of Public Schools, Cambria County, Pennsylvania said: "There should be not only master farmers, but master farm home makers as well". The girls and boys should be given a share in the development of the farm, and should be made to feel they are partners in a great enterprise. More attention should be given to the health of the farm people, and especially to the care of teeth and the tonsils of the children."

Trailing a Piece of Dairy Council Literature

The Dairy Council each year distributes hundreds of thousands of pieces of health literature. What becomes of this material after it leaves the hands of its distributors?

An interesting answer to the question in one instance has been pointed out to the Philadelphia Inter-State Dairy Council when a copy of "Listenin' In" travelled from a summer camp across the state; into a small town to be dramatized by a girls' group; then taken up by the women's club; and finally presented at a county federation meeting. There, a Dairy Council representative found she was sharing the program with one of her own organization's playlets!

This curious journey began during the summer when Laura Betty Amos, of the Philadelphia Inter-State Dairy Council, conducted a week's health program in the Maryland State 4-H Club Camp. "Listenin' In" was presented as a stunt around the campfire.

At that time one of the girls failed to return her copy of the dramatization.

It travelled back home with her. Months went by. Some of the 4-H girls decided to use it at one of their gatherings. The mother of one of the girls recognized it as teaching a valuable health lesson—and the women's club of the town presented it. A little later, when the time arrived for a meeting of the Rural Women's County Federation, "Listenin' In" was scheduled for the program and a Dairy Council representative invited to present "Pep" and a food demonstration.

Through the interest stimulated by such health material as "Listenin' In" it was found that a number of ingenious food exhibits had been arranged for the County Federation meeting, each club assuming responsibility for one display. The exhibits were so simply constructed that they might be easily duplicated by any group desiring to supplement or vary their health program with a visual message.

"A House of Woe" was contrasted with "A House of Health". The former was built of flimsy walls stuccoed with tea, roof of pancakes, sausage chimney and a lawn of ground coffee. Even the yard was pebbled with candies of all sorts. "The House of Health" was a large and more substantial building. Its roof of graham crackers was supported by sturdy oatmeal-coated walls. Other health foods were depicted in such ways as a milk bottle chimney; delicate green lettuce leaves for window curtains, and a garden wall of brown bread. The walls were bordered with prunes and fruits while realistic shrubbery was formed by green vegetables.

The dressing-table furnished by one club was an adaptation of "Happy's Vanity Case" published by the Dairy Council. Red beets were offered for my lady's rouge, and when she desired lipstick, there waited nature's coloring of carrots. These and other aids to a healthy complexion were recommended.

A practical suggestion for cooking with milk was offered at still another table. From a large bottle of milk in the center of the table radiated ribbons leading to various dishes which contained cream soup, creamed vegetables, various cereals and desserts. Each article was accompanied by a placard containing the recipe with suggestions for its use.



Any Way You Figure It Cow Chow Makes You Money!

In more milk and cream—

In cheaper feeding costs—

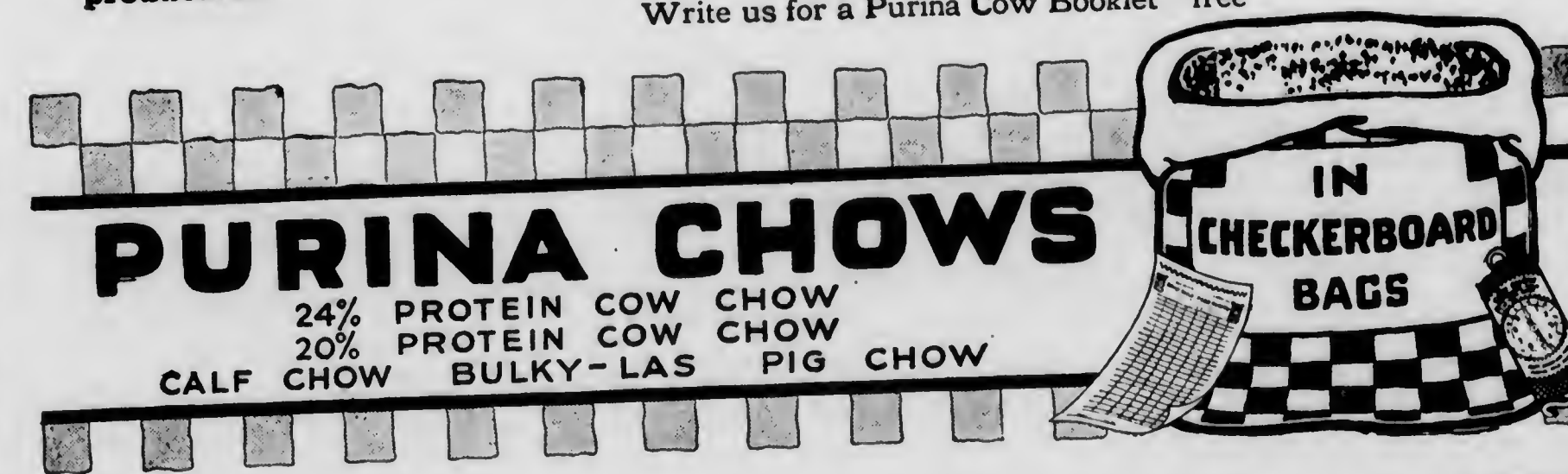
In more net profit per cow.

72,000 dairymen are making more money by feeding Purina.

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Let Bulky-Las work with Cow Chow in increasing your milk production.

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Eight Busy Mills Located for Service
Write us for a Purina Cow Booklet—free



Society of Farm Women Elect Officers

Mrs. J. B. Cassel, Manheim, was elected president of the Society of Farm Women of Pennsylvania at its annual meeting on January 18th, at Harrisburg, Pa. Mrs. A. W. Wolgamuth, Manheim, was elected secretary and Mrs. Samuel Mohler, Ephrata, was elected treasurer. More than 150 farm women attended the meeting.

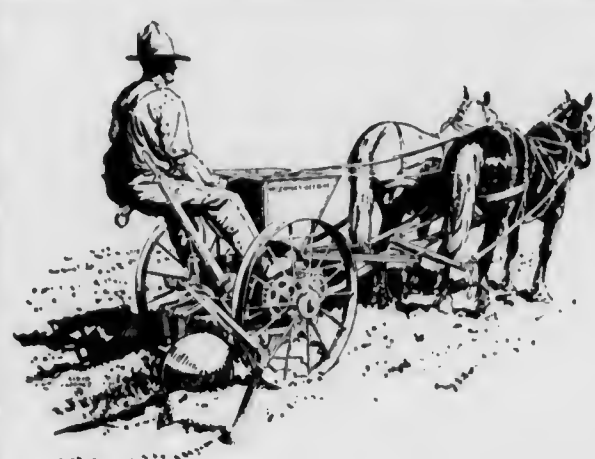
Philadelphia Inter-State Dairy Council

General Offices
219 N. Broad St., Philadelphia

A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value in nutrition.

Affiliated with the National Dairy Council

Officers
Dr. Clyde L. King, Chairman
H. D. Allebach, Vice Chairman
R. W. Balderston, Executive Secretary
R. J. Harbison, Jr., Treasurer
Departmental Branches
C. I. Cohoe, Director Quality Control Department
Lydia M. Broecker, Nutrition Department
Del Rose Macan, Health Dramatic Department



McCormick Deering Potato Planters

It Stands to Reason—

That—it is foolish to plant potatoes by hand. McCormick-Deering planters are perfected to the extent that they handle small and cut seed with almost 100% accuracy. These planters embody the approved principles of construction with several new features which makes them superior in their field. Let them plant well for you.

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FARQUHAR BOILERS

Of All STYLES and SIZES

Especially popular for Dairies, Creameries, Ice Cream Factories, Mushroom Growers, Laundries.

Textile Mills and in fact wherever steam or heat or both are required. Farquhar Boilers are easy and quick steamers furnishing abundant dry, hot steam; built to burn wood, coal or oil. A.S.M.E. Specifications.

Tell us your requirements and we will send descriptive Bulletins of the Boiler or Engine for your individual needs.



A. B. Farquhar, Co., Limited York, Pa., Box 461

Pennsylvania Ayshire Breeder's Association

Elect Officers

The Pennsylvania Ayshire Breeders Association elected at a meeting held in Harrisburg on January 19th, the following officers: president, E. C. Deubler, Narberth; vice president, Dr. E. F. Deubler, Narberth; secretary-treasurer, Mrs. E. R. Fritsche, Merion Station. C. T. Conklin, secretary of the National Ayshire Breeders Association was a speaker at a luncheon held by the Ayshire breeders. Professor E. L. Anthony, of the West Virginia State College of Agriculture, was also a speaker.

Less Corn for Grain, More for Silage

Less of the 1927 corn crop was used for grain and more for silage and "hogging down" than in 1926, according to the Federal-State Crop Reporting Service, Pennsylvania Department of Agriculture.

The percentage of total corn acreage used for hogging down and forage has almost doubled since 1922, while the percentage used for grain as well as that used for silage has not changed materially.

A total of 200,000 acres was used for silage in 1927, 953,000 for grain and 117,000 for "hogging down".

Penna. Dairymen's Association

(Continued from page 8)

Tuberculin testing is just good business sense on the part of the producer. Health authorities approve it and many cities in the state regulate by ordinance that milk for human consumption must come from T.B. free cows. A few sections of the State opposed to the tuberculin test will not hold back the movement. Tuberculin testing is coming fast and soon will cover the entire state.

Dr. F. D. Morrison, Director, New York Agricultural Extension Stations, Geneva, N. Y., made an interesting address in which he strongly featured the value of the complete testing of dairy cattle, for if you don't, he said you will ultimately find yourself holding the bag.

Dr. R. D. Hetzel, President, Pennsylvania State College, in a forceful address laid down the future programs of that institution and its difficulties in meeting demands for the increasing number of students asking for this form of higher education.

An address "The Three Legged Stool of Big Business" by Dr. H. E. Van-Norman, President, American Dry Milk Institute followed.

Award of Prizes

George R. Taylor, Pennsylvania State College, in charge of the Milk Exhibition of the Pennsylvania Farm Products' Show, made the following announcement of prizes.

The exhibit this year totalled 183 samples of milk, as compared to 146 one year ago. Of the total number of samples entered, 122 scored 96 or better. Of the 183 samples in the exhibit, 160 came from milk producers from the Inter-State Milk Producers' Association territory.

DAIRY PRODUCTS AWARDS

Raw Market Milk From T.B. Free Cows
Roy Peterson, 98.6, Franklinville, Huntingdon Co., 1st, Gold Medal; Norman C. Maule, 98.5 Quarryville, Lancaster Co., 2nd, Silver Medal; Mary Carter, 98.5, Pocopson, Chester Co., 3rd, Bronze Medal; Morris Kurtz, 98.5, Oxford, Chester Co., 4th, \$8.00; J. Iden Smith, 98.5, New Hope, Bucks Co., 5th, \$6.00; Mart W. Wade, 98.4, West Grove, Chester Co., 6th, \$5.00; Gilbert Smith, 98.4, Curryville, Blair Co., 7th, \$4.00; J. Raymond Arnold, 98.4, Hellam, York Co., 8th, \$3.00; George Ewart, 98.35, Avondale, Chester Co., 9th, \$2.00; Saucona Farms, 98.35, Bethlehem, Lehigh Co., 10th, \$1.00.

Raw Market Milk

John H. Fry, 98.20, Lancaster, R. 2, Lancaster Co., 1st, \$8.00; Chas. R. Henderson, 97.75, Glenmoore, Chester, 2nd, \$6.00; Ross A. Claycomb, 97.70, Imbler, R. 1, Bedford, 3rd, \$4.00.

Certified Milk

Delchester Farms, 98.70, Edgemont, Delaware Co., 1st, Gold Medal; Pennhurst Farms, 98.00, Narberth, Montgomery, 2nd, Silver Medal; Frederick Taylor, 97.80, Palaski, Lawrence Co., 3rd, Bronze Medal; Bell Farms, 95.35, Coraopolis, Allegheny, 4th, \$6.00; Lenkerbrook Farms, 93.45, Harrisburg, Dauphin, 5th, \$4.00; Hernes Groves, \$2.50, Baeburn, Westmoreland, 6th, \$2.00.

Pasteurized Milk

Supplee-Wills-Jones, 98.00, Philadelphia, Philadelphia Co., 1st, Gold Medal; D. R. Hess, 97.85, Lancaster, Lancaster Co., 2nd, Silver Medal; W. W. Barnum,

97.50, Smethport, McKean Co., 3rd, Bronze Medal; J. E. Harshberger, 97.20, Altoona, Blair Co., 4th, \$4.00; J. W. Ferral, 96.00, Williamsburg, Blair Co., 5th, \$3.00; Connelville Cooperative Dairy, 95.35, Connelville, Fayette, 6th, \$1.00.

Farm Butter—Class A

Mrs. C. M. Schwab, Loretta, Cambria Co., 1st, \$10.00; John E. May, Dover, York Co., 2nd, \$7.00; C. E. Koppenheffer, Halifax, Dauphin Co., 3rd, \$5.00.



Roy Peterson, Franklinville, Pa., Sec'y, Spruce Creek Valley Local I. M. P. A., winner of Gold Medal and other prizes for milk production

Creamery Butter—Class B

Hershey Creamery Co., Chambersburg, Franklin Co., 1st, \$10.00; Fairmount Creamery Co., Pittsburgh, Allegheny Co., 2nd, \$7.00; Greenville, Mercer Co., 3rd, \$5.00.

Special Awards

Special award of a silver cup was also made by the American Jersey Cattle Club to W. C. Randolph, Royersford, Pa.

The Pennsylvania Federation of Holstein Friesian Clubs, presented a silver medal to Saucona Farms, Bethlehem, Pa.

The Philadelphia Inter-State Dairy Council presented an award of a Stewart clipping machine, for the best sample of milk produced by a farmer holding a Permanent Permit, issued by the Dairy Council, to Roy Peterson, Franklinville, Pa.

The Pennsylvania Guernsey Breeders Association presented a silver cream cup to Hill Girt Farms, Cossait, Chester Co., Pa., while the Dairymen's League, Inc., presenting a clipping machine to Roy Peterson, Franklinville, Pa.

Cow Testing Association Ribbons

The awards for ribbons to be presented members of Pennsylvania Cow Testing Associations was announced by C. R. Gearhart, of Pennsylvania State College. There have been awarded a total of 534 ribbons, under the various classes of butterfat production, ranging from 400 pounds or over, down to 300 pounds.

Roy S. Bowers, of the Wellsboro Cow Testing Association, with the highest producing herd of Holstein-Friesian cattle, was awarded a silver loving cup by the Holstein Friesian Federation of Pennsylvania.

The following milk producers in the Philadelphia Milk Shed, in the State of Pennsylvania were awarded ribbons in the various grades noted. (See page 9.)

COW TESTING ASSOCIATION AWARDS

A List of Association Members in the Inter-State M. P. Association Territory With Herds Averaging Five or More Cows, Which Exceeded the Goal of 300 Lbs. Butterfat Average During 1927

(Continued from page 9)

Owner	Address	Lbs. Milk	Lbs. Fat	County
Miss L. T. Morris	Chestnut Hill	5531	319.7	Montgomery
Delaware County Home	Home, Lima	7997	319.5	Chester
Hartman & Weinberger	Palm	8886	319.3	Montgomery
O. M. Woodward & Son	Pennsburg, R. D.	7401	318.5	Montgomery
S. E. Raudabaugh & Son	Mechanicsburg, R. D. 6	9323	317.9	Butler
Furman H. Gyger	Kimberton	8692	317.9	Chester
Henry Urb	McClure, Pa.	9160	316.3	Millin
J. Norton Kruger	Carlisle, R. D.	8017	315.9	Cumberland
J. I. Smith	New Hope	6100	315.5	Bucks
S. E. Lee	Bedford, No. 3	6026	315.5	Bedford
J. M. Kimmel	Kimberton	6313	315.2	Chester
Wm. Barrett	Woodbury	6944	314.7	Bedford
Samuel Cessna	Bedford No. 4	8738	314.5	Bedford
L. D. Weary	Carlisle, R. D. 7	9502	314.0	Cumberland
C. D. Taylor	Dallastown	7074	314.0	York
W. E. McMeen	Port Royal, Pa.	9281	313.3	Junata
M. B. Satterthwaite	Newtown	9134	312.9	Chester
Wm. M. Lloyd	Downingtown	6166	312.6	Huntingdon
Wm. Woo Ivorton	Alexandria	6229	311.8	Blair
G. Clair Smith	Marlinsburg	8672	311.4	Montgomery
Mrs. W. B. Saunders	Millintown, Pa.	8251	311.4	Junata
George Colyer	Downingtown	8947	310.4	Chester
Wallace C. Pierson	West Chester	6183	310.3	Chester
Robert Brinton	Newport	9149	310.2	Chester
H. L. Ulsh	Phoenix, R. D.	7869	308.0	Perry
Henry Suplot & Sons	Carlisle, R. D. 7	8797	307.8	Chester
Albert F. Yost	Bristol	9544	307.7	Cumberland
P. B. Morris	Port Royal, Pa.	6323	306.8	Bucks
G. E. Groninger	Belleville, Pa.	8179	306.4	Junata
J. C. Fleming	Boiling Springs	9190	306.1	Millin
Jacob B. Meisel	Millerstown, Pa.	9113	305.4	Cumberland
E. G. Ferguson	Bedford, R. D. 4	7757	305.3	Junata
Harvey England	East Greenville	8964	305.1	Bedford
Mrs. Howard Bieler	Lewistown, Pa.	8759	305.1	Montgomery
S. C. Mitchell	Glen Moore	8643	304.6	Millin
Jonathan P. Styer	New Hope	7879	304.5	Chester
G. S. Havens	Millintown, Pa.	6072	304.3	Bucks
G. Lloyd Heckman	West Chester	10055	303.8	Junata
Frank Keen	Longsburg	8909	303.3	Chester
S. H. Markley	Mechanicsburg, R. D. 5	6493	303.2	Bedford
Joseph M. Conrad	Woodbine	8552	303.1	Cumberland
Dale D. Kilgore	Yardley	7765	303.0	Montgomery
J. S. Briggs	Trappe	7279	302.9	York
H. D. Allebach	Delta	8630	302.8	York
George W. Wambaugh	Center Valley	7105	302.2	Bucks
M. B. C. Home Farm	Mechanicsburg, R. D. 5	9134	301.3	Lehigh
John L. Baschore	Pottstown, R. D. 2	9184	301.2	Cumberland
H. L. Stoltzfus	Lansdale, R. D. 1	8969	301.0	Chester
A. K. Roederberger	Belleville, Pa.	8579	300.5	Montgomery
Rudy J. Yoder	Altoona, R. D. 3	8675	300.3	Millin
Dr. Findley	West Chester	8863	300.0	Blair
E. Page Allison	West Chester	8707	300.0	Chester

Inter-State Milk Producers' Association

Incorporated
Flint Building, 219 N. Broad St.,
Philadelphia, Pa.

Representing over 21,000 Dairy Farmers in the Philadelphia Milk Shed.

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Report of the Quality Control Department, Philadelphia Inter- State Dairy Council.

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of December, 1927.

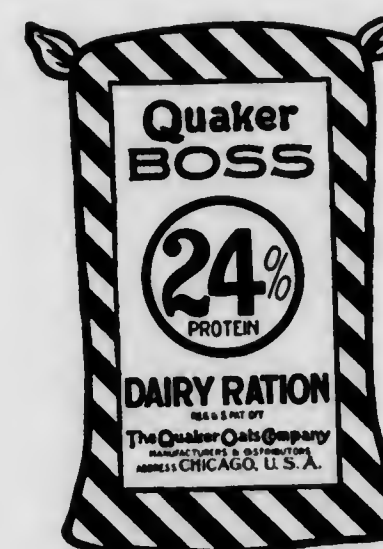
No. Inspections Made . . . 2,636
No. Sediment Test . . . 2,089
No. Meetings Held . . . 8
Attendance . . . 1,698
No. Man Days, Fairs and Exhibits . . . 9
No. Temp. Permits issued up to December 31st, 1927 . . . 24,564
No. Permanent Permits issued up to December 31st, 1927 . . . 10,763
During the month 81 dairies were discontinued from selling for failure to comply with the regulations—42 of which were reinstated before the month was up.
To date 69,979 farm inspections have been made.

Before and After

Before prohibition the longshoremen along the San Francisco water line consumed daily 800 cases of beer. Figures carefully compiled show that they now drink 5,800 quarts of milk daily, with their noonday lunches.

Forest fires cost \$2,000,000 annually in timber lost.

It Does the Work
—and Does It
at a Profit!



The big thing you want to know about a feed is "Will it make money for me?" Quaker Boss Dairy Ration will pay you a handsome profit—if you use it according to the Quaker method. For this famous feed is prepared to a formula that has behind it the scientific knowledge, the great manufacturing resources, and the good name of The Quaker Oats Company. It's just the ration of maximum production—rich in minerals and choice proteins. Keeps cows at their best. It is the ideal supplement for your hays, silage, and other home grown roughages. See your Quaker Dealer.

Made by

The Quaker Oats Company

CHICAGO, U. S. A.

Manufacturers of a complete line of live stock and poultry feeds—look for the striped sacks

Quaker Sugared Schumacher Feed

Just the feed for combining with Quaker (16%), or Quaker Big Q (20%), or Quaker Boss (24%), or any high protein concentrate. Sugared Schumacher is a choice feed for young or dry stock; and a splendid fattening ration for steers, lambs and swine

Thin the Farm Woodlot

Thinning out the crooked, short, bushy-crowned, diseased, slow-growing, and poor timber trees is a paying farm operation at this time of the year. Trees that are straight, tall, well-crowned, sound, fast-growing, and good timber should be saved. Where trees are too thick some should be taken out to give the remaining ones a chance to develop.

Plan Farm Operations

Make a complete plan for the operation and the operation of the farm this year. No farm business can be operated successfully without a plan.

Silo is Menace to Corn Borer

Using corn for silage is a natural, efficient, and economical way to control the corn borer. Putting the corn through the ensilage cutter, the acid formed when the corn ferments, and the pressure in the silo kills the borers. Shredding corn fodder by machines makes a more palatable food for cattle, and at the same time, if sufficient pressure is used, it kills the borers.

On many farms corn fodder is commonly fed to cattle in the barn yard. This practice destroys some of the borers, but the parts of stalks remaining harbor them. All the uneaten parts of stalks should be collected and burned or placed on a field where they will be plowed under.

WHY USERS of Purity Strainers GET GRADE A TESTS

It Strains Milk ABSOLUTELY CLEAN

Absolutely clean milk grades higher and means more money for the producer. Unless milk is CLEAN it will not test Grade "A", regardless of its percentage of butterfat.

Dr. Clark's Purity Strainer with its sterilized cotton disc clamped on the bottom is the ONE strainer guaranteed to strain your milk 100% Clean. No other strainer can compare with PURITY for simplicity and real efficiency. That's why they are used by thousands of farmers, creameries and large condenseries. Sold by good dealers everywhere. Made in two sizes—10 qt. and 18 qt.

10 Day Trial Test

Write at once for our 10 Day Trial Test Offer. Find out how you can test the PURITY strainer and get your money back if it doesn't remove every particle of dirt, dust and sediment from your milk. We will send complete particulars of our "10 Day Trial Test Offer" by return mail.

PURITY STAMPING CO.
Dept. F4 Battle Creek, Mich.

DR. CLARK'S
Purity
MILK STRAINER

TRADE MARK **NICE** REG. U.S.A.

THE NAME TO GO BY—WHEN YOU GO TO BUY
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Write for color Cards and Booklet "Paint Pointers"
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Fine illustrations and complete descriptions

NO matter what you need you can see a good illustration of it in the Bestov Supply Book. You can also find out all about it by the complete descriptions. After looking through the Supply Book you will feel as if you have just gone through a large and complete dairy supply house, which in reality you will have done.



These books are FREE and we will be glad to send you one if you will send us your name and address. Write today — tomorrow the might be all gone.

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\$25 Kennedy Utility Saw

Will cross-cut, rip, plane, groove and tongue plough, mitre, bevel bore, sand rabbit, tenon mortise joint, make mouldings, etc.
L. M. KENNEDY, 222 N. 7th St., Phila., Pa.

What the Distributor Expects of the Producer in the Matter of Quality in Milk and Why

(Continued from page 2)
Many times that equipment is inadequate for best results and changes must be made. The sanitary regulations governing the production of clean milk call attention to the defects in equipment, management and methods which when corrected make milk production easier and usually results in a lower cost of production.

The distributor does not wish the producer to be overloaded with unnecessary requirements but does insist that every effort be put forth to give the market that cleanliness which it demands.

The distributor must, at all times, keep before the producer the demands of the market as he is where he can keep his finger on the pulse of the market. The distributor knows that food value, healthfulness and cleanliness are not the only factors to be considered. The housewife demands also a bottle of milk which will keep a reasonable length of time. She is concerned with the keeping quality of milk.

The keeping quality of milk is dependent upon the bacteria content of the milk and the temperature. The producers' problem is to eliminate as far as possible the entrance of contaminating bacteria into the milk and to hold the milk under conditions which will not allow for their growth after they enter the milk. The production of low bacterial count milk at the source insures a longer keeping period.

Milk can be held for long periods at low temperatures when care and attention have been given to methods and cooling. The greatest handicap the average dairyman has today is the lack of proper cooling facilities. In my opinion it is the weakest link in the factors which go to make up the chain.

The distributor and others have worked hard to encourage the producer to put ice up for use in summer, but to no avail. Ice is the best medium for cooling milk—it duplicates winter conditions in summer, as the silo duplicates pasture in winter. Thousands of dollars are lost to the milk producers annually all because the producers have failed to meet their responsibility. The receiver of milk must be on the alert at all times to exclude dirty milk, high acid milk, milk with off flavors and odors from the supply. The farmer today must realize there is a market for salable milk only, and the rejection of unsalable milk is for the purpose of protecting the market of the careful producer.

The market demands a clean, sweet, safe and wholesome milk and it is through cooperation between the distributor and producer that the quality of milk desired will be obtained.

*Presented at the meeting of the Penna. Dairyman's Association, Harrisburg, Pa., by H. D. Davis, Supplee-Wills-Jones Milk Co., Philadelphia, Pa.

Poultry Records Valuable

A system of poultry records that gives the life history of the individual concerned, its ancestors and their life history, its brothers and sisters and the history of their lives, its matings, and the story of the progeny from the matings will tell the poultryman what progress he is making in his breeding work.



The lowest prices of the year are now effective. Next month, you will pay more, and later still more. Get your order in this month and save money. No deposit required. Pay on delivery or from your monthly milk checks.

The 1928 Harder Silo has many exclusive new features. There's a Harder that meets your needs, at a price you are willing to pay. Write today for our Early Order Proposition.

HARDER SILO CO., Inc.
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Willard Storage Battery and Service Station

Starting, lighting, ignition—storage batteries of every description, make and for every purpose are recharged, repaired and rebuilt here by skilled battery men working in a fully equipped and stocked shop.

OUR SERVICE is unbiased and dependable.

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High Grade Dairy Cows

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HIGHTSTOWN, N. J.
We handle all kinds of cattle
Holsteins — Guernseys — Jerseys
A Specialty

All cows tuberculin tested and sold subject to a 60 or 90 day retest and fully guaranteed in every respect.
Free delivery any distance.

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QUALITY CHICKS

Chicks from winter laying, farm raised mature stock S. C. W. Leghorns, R. I. Reds, Barred Rocks, White Orpingtons, Anconas, Black Jersey Giants, White Wyandottes, White Plymouth Rocks, Black Minorcas, Pekin and Indian Runner Ducks: \$15 per 100 up. Live delivery guaranteed. Parcel Post prepaid. Hatching eggs, \$8.00 per 100 up. Several breeds rabbits. Circular free. Shipments will be made from one of our nearest associated hatcheries.
Glen Rock Nursery and Stock Farm
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AT LAST Guesswork and Overmilking ELIMINATED WITH



The DUPLEX VISIBLE MILKER

Automatically Controlled
When milk stops flowing vacuum is shut off automatically.

HAND, GAS ENGINE
or ELECTRIC

No pipe lines — no pulsators — no regulating valves — no constant vacuum. The DUPLEX VISIBLE is easier for the cow because of its complete release between each stroke.

Easy to operate, easy to clean.

"My two children, age twelve and fourteen years, milk fourteen cows, clean the machine and care for the milk. I can recommend your milking machine. Its operation is very simple."
VAN MATTESON,
Friendship, N. Y.

A SPECIAL OFFER NOW
To only One actual Dairyman in each community to introduce this simplest, latest and best development in milking machines.

Whether you have ever thought of buying a milker or not, get confidential offer.

Send in the coupon today. Don't wait. A two-cent stamp may mean hundreds of dollars to you but you must be an actual milk producer. The first reputable, responsible party who answers will be glad he did.

Send Coupon Now and get "What Users Say" and our special low price proposition before someone "beats you to it."

Bath Mfg. and Sales Corporation
Bath, N. Y.
Please send me (without cost or obligation) your circular "What Users Say" and your SPECIAL OFFER which I agree to consider confidential.

Name
Address State
R. F. D. No. No. cows milked

Cordova, Md., Station Now Receiving Only T.B. Free Milk

Cordova receiving station is the first receiving station on the Eastern Shore of Maryland to receive all of its milk from tuberculin tested herds. The work of clearing up the herds around this station has gone on throughout the fall and up to the present time and now this station has the distinction of being the first one receiving milk from nothing but tuberculin tested herds.

Recent reports show that the quality of the milk being received at the Cordova station has been greatly improved since the herds in that section have all been cleaned up.

There are 134 patrons consigning milk to the Cordova cooling station, 26 of these have accredited herds, totaling about 300 cows. The remaining 108 patrons originally had 1294 cows which were tested between October 1st, 1927, and January 1st, 1928, finding 297 reactors.

In view of the fact that a large number of these herds had never been previously tested, the percentage of reaction found, was not surprisingly high. The largest number of reactors being found in herds where large numbers of cattle had been brought in from time to time. The lowest percentage of reaction occurring in the herds that had been built up by the raising of heifers instead of through the method of purchasing milk cows.

There has been tested in the Chapel District, 257 herds, totaling 2389 animals out of which 471 reacted. The reactors were found on 114 different herds. There are 35 accredited herds in all in the Chapel District that contain approximately 512 head. The total number of tested cattle in this District was 2901. On this basis, the percentage of reaction for the district ran slightly over 16 per cent. Taking the work on a whole and eliminating several of the most unfortunate, the percentage of reaction per herd, has been surprisingly low.

This Cordova receiving station is operated by Abbotts Alderney Dairies, Inc., of Philadelphia, and we understand that the volume of milk coming to this station is now in excess of what it was at this time one year ago.

Guernsey Breeders Elect Officers

Pennsylvania Guernsey Breeders in their annual meeting at Harrisburg, Pa., empowered the president of the Eastern Guernsey Breeders Association, G. H. Hibbard, Brooklandwood Farms, Brooklandville, Maryland, to select a committee composed of one member from each of the district and county associations in the state.

This committee is to direct and execute fairs involving the interests of Pennsylvania Guernsey Breeders' Ass'n.

The Guernsey Breeders again next year will give a special cup for the best sample of Guernsey milk exhibited at the State Farm Products Show and also will award a cup to the Guernsey breeder having the best record in cow testing association work.

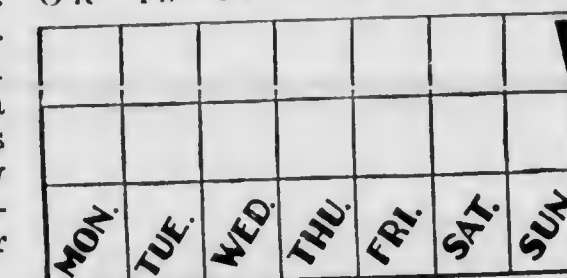
Alfalfa a Rich Feed

Alfalfa is the most efficient producer of high-class protein. This legume will produce at least fifty per cent more hay per acre than the common clovers.

Do your cows main- tain an even milk flow?



OR IS IT LIKE THIS?



THE business dairyman appreciates the importance of keeping the milk yield of the individual cow up to a high level throughout the entire lactation period. Every feeder knows that if, for any reason, a cow falls off at the pail, it is almost impossible to bring her back again.

The dairy ration is, by far, the most important factor in controlling the uniformity of milk production. If it is not properly balanced, if it is loaded with some single concentrate because it happens to be cheap and that results in digestive disturbance, constipation may result—or there may be an epidemic of caked udders to reduce the milk flow permanently.

Such dangers can be avoided by the constant use of UNION GRAINS. Time and experience have abundantly proved the fact. Twenty-five years of practical, profitable dairy feeding with UNION GRAINS, the oldest mixed dairy feed—and the best—is unqualified evidence of the real values that go into it.

UNION GRAINS is a scientific blend of ten different ingredients, each one contributing

a definite nutritive value to the ration. It has exactly the proper kinds and amounts of protein, carbohydrates, fat and minerals. Its vitamin content is complete. It is in a class by itself, measured in terms of palatability, digestibility, the health of the cow, milk yields and the satisfactory size of the milk checks.

UBIKO Dairy Service Bulletin Free

We will send our new bi-monthly publication, the "UBIKO Dairy Service Bulletin," regularly to dairymen who ask for it. Each issue will contain a helpful article on some phase of dairying written by a recognized authority—also other up-to-the-minute information regarding feeding, health, etc. Write today.

THE UBIKO MILLING COMPANY, Dept. L-14, Cincinnati, Ohio

UNION GRAINS
THE FIRST DAIRY FEED MADE

Makers of UBIKO World Record Feeds

UBIKO 32 Ration (32% Protein). For mixing with home-grown grains.	UBIKO Horse Feed
UBIKO Special Dairy Ration, 20% Protein—sweetened.	UBIKO World Record Buttermilk Egg Mash
UBIKO Calf Meal	UBIKO Buttermilk Starting Mash with Cod-Liver Oil
UBIKO Pig and Hog Ration	UBIKO Fattening Mash
	UBIKO Scratch Feed
	UBIKO All-Mash Rations

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Write LeRoy Plow Co., LeRoy, N. Y.

Announcing the New De Laval 50th Anniversary Separators

IMPROVEMENTS

GOLDEN COLOR. These new 1928 machines are finished in beautiful gold and black colors, which are pleasing, durable and practical.

ENCLOSED GEARS. All gears on the "Golden Series" are completely enclosed and protected, insuring maximum durability.

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TURNABLE SUPPLY CAN. A novel feature every separator user will appreciate. Permits bowl and covers to be removed or put in place without lifting the supply can from its position.

EASIER TURNING. The "Golden Series" machines are easy to start and turn, requiring the least power or effort to operate for the work they do.

OIL WINDOW. Shows at a glance the amount and condition of the oil and whether the separator is being properly lubricated.

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Liberal trade allowances are made for old separators of any age or make on account of new De Laval's, which will soon pay for themselves in saving of butter-fat and time.

The De Laval Milker

A great companion to the De Laval Cream Separator—equally useful and efficient. Now milking more than one million cows in all parts of the world. Milks faster and better than any other method. Pleasing to the cows and produces clean milk. Simple and durable, does not require adjustment, easy to operate. Makes dairying more pleasant as well as more profitable. Outfits for from five to 500 or more cows. Sold for cash or on self-paying terms.



New De Laval's Now on Display

The "Golden Series" Separators are now on display by De Laval dealer-agents, who will gladly show their numerous improvements and refinements. See and try one of the "Golden Series," or send coupon below to your nearest De Laval office for catalog and full information.

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New York, 165 Broadway
Chicago, 600 Jackson Blvd.
San Francisco, 61 Beale St.

Please send me without obligation, { Separator ☐ } check which
send information on { Milker ☐ }

Name

Town

State R. F. D. No. Cows

FIRST in 1878



BEST in 1928

THE GOLDEN SERIES

Dr. De Laval's invention, in 1878, of the first continuous discharge centrifugal cream separator, was the foundation of modern dairying and has done more than any other one factor to develop the dairy industry into the largest and most profitable branch of agriculture.

First in the beginning, the De Laval has kept in the lead ever since. Practically every detail of separator construction has been De Laval originated. As De Laval features have been imitated, further De Laval improvements have been made. Four million De Laval machines have been sold the world over. They have always been the standard by which cream separators were measured.

Now the 1928 "Golden Series" De Laval machines mark another step forward. In a word, they are the most complete, efficient and beautiful cream separators ever made. They are all that could be hoped for in such a machine. They must prove a source of pride as well as profit to every owner.

The best way to judge a new Golden Anniversary De Laval machine is to see one, and better still to try it side-by-side with any other separator, old or new. We do not believe anyone can do that and not choose the De Laval, with its many points of superiority.

The new machines are made in seven sizes, ranging in capacity from 200 to 1350 lbs. of milk per hour. They may be operated by hand or any form of power and may be bought for cash or upon such terms as to pay for themselves.

Milk Producers Review

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS ASSOCIATION, Inc.

Volume VIII

West Chester, Pa., and Philadelphia, Pa., March, 1928

No. 11

The Dairy Outlook, Excerpts From the Agricultural Outlook

BUREAU OF AGRICULTURAL ECONOMICS

The position of the dairy industry appears on the whole to be fully as strong as it was a year ago. There are as yet no indications of any material expansion in dairy production in the near future. In comparison with a year ago there has been no increase in the number of cows being milked, no significant increase in the number of heifer calves being reared and no material change in the disposal of old cows.

The relatively higher prices of feed grains and other concentrates this year as compared with last year will tend to decrease milk production during the present feeding season, but this may be offset in a measure by the abundance and cheapness of legume hays. Probabilities are that during the coming grass season the record pasture conditions of last summer and fall will not be repeated.

Domestic demand is likely to be fully maintained during the coming year. The foreign situation on the other hand is such that price depression abroad is resulting in increasing imports into our markets, with the prospect that the increasing foreign supplies will be further drawn upon to supplement domestic production.

Dairy Cow Situation

The estimated number of yearling heifers being kept for milk on farms January 1, 1928, was 4,173,000, an increase of 127,000 head or 3.1 per cent over the number on hand a year ago. The estimated number of heifer calves saved for milk shows an increase of 217,000 head, or 4.6 per cent. Although these changes indicate a slight tendency toward increasing the size of dairy herds, the increases are small in comparison with the total number of milk cows on farms, estimated at about 22,000,000. On the whole, it seems probable that the increased number of heifer calves saved in 1927, is only sufficient to cause an increase of about 1 or 2 per cent in the number of milk cows in 1930. It is possible, however, to increase the herd by retaining old cows beyond the usual age although this tends to be prevented by the present favorable prices of beef.

Although the numbers of dairy cows slaughtered in 1927, as a result of tuberculosis eradication campaigns may have had some significance locally in certain districts, the numbers were not sufficiently great to be regarded as of particular importance from the standpoint of total milk production, being only about 1 per cent of the total estimated milk cow population.

Total butter production has shown a continuous upward trend since 1920; it was very pronounced until 1924, and has been considerably less marked since then. Creamery butter production during 1927, showed only a slight increase despite the usually favorable pasture season. Cheese production, which had shown a strong upward trend from 1920

through 1925, turned downward in 1926 and 1927 with declines of 3 and 6 per cent respectively. Condensed and evaporated milk production continued its upward trend with a heavy increase in 1927. Production of fluid milk in most areas averaged slightly higher in 1927 than in 1926, and the percentage used for fluid purposes continued to increase.

As a whole, milk production in 1927 was but little higher than in 1926, but

Dairy Herd Improvement Through the Dairy Sire

L. G. McLAIN*

Within limits far above the average production of the dairy-herd-improvement association cows throughout the United States, the high-producing cow is the most profitable cow. Outside of the man consideration the individual cow is the unit of profit in the dairy business. The principle of volume of business, which is so fundamental in commercial realms, applies equally well to the dairy business, and to the production of the

to be so practical that it is receiving more and more attention, as is evidenced by the growth of dairy-herd-improvement associations and other forms of testing cows for production. These associations which bring about better management, more efficient feeding, and greater interest in the dairy industry, develop what might be called the mechanical efficiency of the cows or their inherent ability to produce. It is always a good policy to do the best you can with what you have and gradually to raise the standard. Management, selection, feeding and interest in the business, however, have their limits in raising the production of cows; for cows like automobiles are geared to certain points of efficiency, beyond which they can not go. Consequently, if greater efficiency is required a higher geared mechanism must be had.

A problem of great importance to dairy farmers throughout the country, especially those who are members of dairy-herd improvement associations, where the cows average 65 per cent more than the average cow of the country, is to find some rapid way to obtain cows with greater inherent producing capacity. Taking for granted that everything possible has been done to get the greatest production per cow through efficient management, the bull is the greatest single factor in rapidly increasing the number of high-producing cows in a community.

A bull properly handled will sire at least 25 heifer calves a year. A cow will have a heifer calf on the average only every two years. The influence, so far as rapidity of increasing cow population is concerned, therefore, is 50 to 1 in favor of the bull. If all bulls had the capacity to increase materially the production of their daughters, it would be a comparatively simple matter to populate the country with higher-producing cows in a relatively short time. However, bulls vary in their ability to increase production. In fact, studies of a large number of bulls being used in dairy-herd-improvement associations throughout the country show that some bulls have decreased production 111 per cent and some have increased production 56 per cent. Figures from dairy-herd-improvement association records show that the bulls bred to cows producing about 4,500 pounds milk, which is the average production of the cows of this country, increased the production of the daughters over that of the dams by 62 per cent in milk and by 67 per cent in butterfat. A study of several hundred bulls owned by dairy-herd-improvement association members shows that approximately one-third increased production of their daughters over that of their dams materially, one-third increased the production by a small amount, and one-third decreased production. Studies of about

(Continued on page 9)



HAVE YOU HAD
YOUR
MILK TODAY

Poster made by a student of the Shippensburg, Pa., Normal School, for display during "Health Week", recently held in that city

a larger proportion was devoted to the more valuable uses.

During the summer of 1927, increased production and reduced movement into consumptive channels caused storage of butter to reach 163,700,000 pounds on September 1, a record level, and stocks of condensed and evaporated milk to become heavier than usual. Most of the extra accumulation of butter has now been worked into consumption without material effect on price, however,

(Continued on page 2)

individual cow in particular. Dairying has come to be a competitive business and one in which efficiency of production must receive more and more consideration if competition is to be met in a successful way. Studies have shown that when production per cow is increased from 4,500 pounds milk to 9,000 pounds milk, only 40 per cent more feed is required to secure this additional quantity.

Raising the average production of cows throughout the country has proved

THE DAIRY OUTLOOK

Excerpts From the Agricultural Outlook, U. S. Bureau of Agricultural Economics

(Continued from page 1)

and the stocks of concentrated milk have not affected markets unfavorably. Cheese stocks on January 1, on the contrary, were 12 per cent lower than a year earlier, reflecting the reduced production.

In addition to domestic production, dairy products equivalent to almost a billion pounds of milk were imported, in spite of the prevailing tariffs.

Shifts in the Dairy Industry

With growing population and with increased consumption of dairy products, significant changes are taking place in dairy regions. In Wisconsin enlarged demands for fluid milk and sweet cream explain much of the recent decline in cheese production in that state. Increased demand for sweet cream in many eastern consuming centers has led to the growing long distance shipment of this commodity, cutting into production of manufactured products. In eastern producing regions the upward trend in the proportion used in fluid form is likely to continue during 1928. In addition to these shifts, butter and cheese production is being expanded in some of the newer dairy regions, particularly in certain inter-mountain States. In the South several new condenseries have been established in regions where there is a growing realization of the possibilities in dairying. The general tendency toward higher valued products in the older dairy regions and the opening up of new territories reflect the inability of dairy product manufacturers to compete in price with the users of fluid milk. This has resulted in the forcing backward of the "milk frontier".

The United States will probably continue to import large quantities of cheese, fresh cream, and milk, and to import some butter. Our exports of condensed and evaporated milk will probably continue to decline, owing to foreign competition in the production of condensed and evaporated milk and to the protected position of the producers of other dairy products.

Since production and prices of dairy products in foreign countries tend to affect the price level to which our domestic prices can rise, producers should watch developments as to foreign production and markets. Foreign dairy production has recovered from the effects of the war and continues to increase. The rate of increase, however, appears to have been checked in the past two years, with supplies of butter and cheese in the principal foreign markets in 1927 practically no greater than in 1926, and only slightly greater than in 1925. The checking of supplies however, has been due in part to temporary conditions such as drought in Australia. Present indications are that foreign dairy production next year will be maintained and may be increased. A favorable season in Australia such as in 1920-21 and 1924-25, together with favorable conditions in other important producing countries, would probably result in a considerable increase in supplies.

The ability of foreign markets to absorb the supply of the surplus-producing countries will probably be no greater in 1928 than in 1927. With no increase in the purchasing power in

Great Britain, which is the most important foreign market, any increase in supplies would probably result in lowering foreign market prices and increasing shipments to this country. In Continental Europe at the present time there is not a potential market for increased supplies such as that which developed in Germany in 1924 and 1925. Germany is now producing about 85 per cent, on a milk equivalent basis, of the dairy produce consumed within that country. With this recovery in production and with no prospect of further improvement in purchasing power of German consumers no relief can be expected from that source. Improvement in economic conditions in Italy and France will probably have little if any effect upon the demand for foreign butter.

With respect to probable imports of cheese, fresh cream, and milk, it may be said that conditions appear favorable for further increase in the imports from Canada.

During recent years the total domestic consumption of fluid milk, butter, cheese, and concentrated milk has been increasing. In 1927, however, there was apparently not the usual increase. The purchasing power of urban consumers declined during 1927, until at the end of the year it was materially below the early part of the year; which partially explains the slowing up of the increase in consumption of butter and cheese; consumption of fluid milk, however, continued its previous increase. The difference in price between high grade and lower grades of creamery butter has been greater this year than for several years previous. This undoubtedly reflects in some measure the increased demand for the better grades of creamery butter.

Present indications are that business conditions will be on the upward trend through the first half of 1928, with possibly a seasonal dip in mid-year. There is apparently a long-time upward trend in the demand for dairy products. Farmers in most fluid milk areas received moderately higher prices for their milk in 1927 than in 1926. This fact was due to the higher prices received for milk used for fluid purposes and for milk which went into surplus uses, and to the greater percentage of the total production used for fluid consumption.

As predicted in the 1927 Outlook Report, the number of dairy cows has not been materially increased and a rather favorable spread between the cost of food stuffs and the price of dairy products prevailed through 1927. Present indications are that similar conditions will continue for another year or two and perhaps even longer. Roughages, especially legume hays, are unusually abundant this winter in the great butter-producing area of the Midwest, and silage and feed grains are as plentiful as they were a year ago. The increased supply of legume hays will tend to increase production during the winter feeding season offsetting the usual tendency of higher prices of concentrates to reduce production. In the fluid milk areas where the dairymen purchase a considerable portion of their concentrated feeds, the spread between feed costs and the price of milk may not

be so favorable because of the relatively high cost of concentrates.

Beef cattle are in demand, the beef producing sections are more prosperous than they have been and, with the exception of some of the irrigated sections, the increase of dairying in the beef-producing sections will probably be slower than heretofore. The number of cows slaughtered has run fairly heavy during recent months compared with last year, and with milk cows showing unexpected value for beef purposes, there is little reason to expect any marked tendency to increase dairy herds by holding the old cows, except in some of the eastern states where the scarcity of cows has become rather acute. While there has been a sharp increase in the average price of milk cows in all parts of the country, the increase seems to be little more than the increase in the beef value of the cows.

Summarizing the prospective supply situation for the current year, there seems nothing to indicate any increase in milk production except the result of the general improvement in the quality of cows and methods of management, and intensity of feeding. These together will hardly increase production more than is needed for the natural increase in population. A markedly wider spread between the cost of feed and the price of dairy products would no doubt stimulate production, but there seems no particular reason to expect the present spread to be widened by any marked decrease in the price of feed, and in view of the foreign situation a materially higher price for dairy products as a whole is not expected. Although the ratio of the price of feed to the price of dairy products might easily become somewhat less favorable than at present, dairy producers can reasonably look forward to only a very gradual expansion in dairy production during the next two years and to a continuation of conditions somewhat similar to those which now prevail.

The supplies of beef cattle are low and there is good reason to expect rather favorable prices to continue for some time. This will afford dairymen an exceptionally favorable opportunity to dispose of their old cows and low producers at prices high enough to contribute largely toward covering the cost of raising young animals to replace them.

Dairymen who have cows of good productive ability, therefore, will probably find it profitable to raise more than the usual number of calves in 1928. This is particularly true of those farmers who have good reserves of hay. Prices of milk cows on January 1, averaged about 24 per cent higher than a year ago. Expansion of production should take place only at about the rate of the increase in the demand for dairy products in the United States. It should be borne in mind that the tendency to increase dairy production evidenced by last year's increase in number of heifer calves kept will not be realized in increased production until these calves have begun to produce, and if, in the meantime, the herds are increased too rapidly the result in about 5 years will be over production and depressed prices.

The generally favorable outlook for dairying seems to be shared by practi-

cally all sections of the country, and all sections show moderate increases in the numbers of heifers and calves being raised for milk cows.

In the northeast the percentage of the production needed to meet urban demands for fluid milk and cream has been steadily increasing and will probably continue to increase for some time to come. Although conditions have been improving gradually for some time there has been no corresponding increase in production principally because of the failure of dairymen to raise heifer calves during the past few years when milk prices were low. Recently interest in dairying has been renewed and there has been an increase in the numbers of calves saved, but on January 1, the total young stock on hand seemed no more than sufficient for normal replacements.

In the central butter and cheese regions conditions seem likely to continue substantially as at present. In the eastern part of this region the shipment of fluid milk and cream seems likely to increase and those localities which are prepared to furnish a large and uniform volume of high-quality product are likely to receive the benefits of somewhat higher prices. The continued increase in butter production in the western portion of the Corn Belt does not seem likely to cause an undue increase in United States butter production.

Increasing consumption of dairy products and development of more efficient methods of production are aiding in the development of the dairy industry in the South. Indications are that there will be a fairly steady expansion, with satisfactory returns to areas which are growing into dairying. Some evidence of the expansion which has already taken place is to be found in the establishment of several condenseries in southern States.

Dairy production on the Pacific Coast is not keeping pace with demand, with the result that the Coast is reaching back into the mountain country for its supplies. The upward trend in demand and rapid development of the industry in this region seem likely to continue for some time.

Governor Fisher to Recommend Ample Provisions for Housing Farm Show

Governor John S. Fisher, of Pennsylvania, has announced his intentions to recommend to the 1929 General Assembly that it make ample provisions for housing the State Farm Products Show.

After addressing the largest meeting of farmers in the history of the Show and making an inspection of all the Show buildings, the Governor said:

"I intend to keep the Show in mind when I make my recommendations to the 1929 General Assembly. This show is unique and the people themselves have developed it. It just suits the agricultural requirements of the State.

"It is better than the state fair idea for it is a real expression of the agricultural life of the people and the very best of that life. It is the duty of the State to make ample provision for the Show in Harrisburg or in the State Capital district."

DAIRY COUNCIL CHANGES FORM OF PERMIT

OLD PERMITS REVOKED MAY 31st, 1928

PERMIT

SHOULD BE POSTED IN MILK HOUSE

This is to Certify that the recommendations of the PHILADELPHIA INTER-STATE DAIRY COUNCIL covering the production and handling of milk have been met and this permit

NOT GOOD AFTER MAY 31, 1929

IS GRANTED TO

JOHN DOE
MECHANICSBURG
PENNA.

C. D. Cohee
Director Quality Control Department

THIS PERMIT MAY BE
REVOKED FOR CAUSE

TEMPORARY PERMIT

SHOULD BE POSTED IN MILK HOUSE

This is to Certify that the holder of this temporary permit has requested the PHILADELPHIA INTER-STATE DAIRY COUNCIL to inspect his premises and make recommendation covering the production and handling of milk.

GRANTED TO

JOHN DOE
WEST CHESTER
PENNA.

C. D. Cohee
Director Quality Control Department

THIS PERMIT MAY BE
REVOKED FOR CAUSE

FACSIMILE OF NEW PERMITS

milk under the sanitary regulations of the Dairy Council.

Every opportunity has been given those who have failed to meet their

marketing their milk through cooperating dealers in this district.

So that there may be no misunderstanding on the part of any milk producer

or are entitled to hold a Permanent Permit. This group of producers have cleaned up their premises, have observed sanitary methods and are producing

obligations and June 1st, 1928 marks the date when this minority of producers must have met the required sanitary regulations if they wish to continue

cer the following point should be observed.

Every producer who at present holds a permanent permit, and is shipping to a cooperating dealer and who has not been notified to the effect that his permit has been revoked or withdrawn, will be issued a new permit, prior to June 1st, 1928. This permit will be good for one year, expiring May 31st, 1929. Every farmer now holding a temporary permit, must pass inspection before June 1st, 1928 and upon approval will be issued a permanent permit. Such a new permit must be held by the shipper if he is to deliver milk to such buyers on and after that date.

Temporary permits bear the word "temporary" on the face of the permit. Temporary permits will be issued only to newcomers in the dairy business, or to shippers not heretofore marketing their milk through a cooperating dealer. Such temporary permits not exceeding ninety days in duration.

Application blanks for temporary permits will be supplied and may be obtained at the office of the Philadelphia Inter-State Dairy Council, or they may be obtained at the milk plants of the various cooperating dealers. Such application for temporary permits will be checked to ascertain if the proposed shipper is in reality a new producer or a beginner in the dairy industry, as heretofore stated, before such application for temporary permit is granted.

Dairymen are urged to make any changes necessary to enable them to meet the Sanitary Requirements immediately, and if the premises are not inspected by May 1st to notify the office of the Dairy Council requesting that such an inspection be made. Delay in making the changes and applying for inspection until late in May may result in a situation whereby the inspectors will be unable to reach the farmer by June 1st—thereby resulting in probable delays in shipping and consequent unnecessary losses as a result of the dairy being discontinued.

STANDARDS SOLVING MARKETING PROBLEMS

National standards for farm products are helping solve our distribution problems. Evidence collected by the Bureau of Agricultural Economics, United States Department of Agriculture, shows conclusively that the use of these standards is reducing marketing costs, saving costs on inferior products which formerly returned less than the handling charges, and placing higher grade products in the markets. The bureau attributes much of the remarkable expansion of the fruit and vegetable industry in recent years to the use of national standards.

Lloyd S. Tenny, chief of the Bureau of Agricultural Economics, who has been personally identified with the Government program of farm products standardization the past thirteen years, is the author of a comprehensive discussion

of the subject, and historical review of the development of standards for each farm product, just published by the United States Department of Agriculture, entitled "National Standards for Farm Products".

Mr. Tenny declares that "the real progress (in national standards) has been made during the recent period of agricultural depression when every function of our marketing machine has been tested with a view to the possible elimination of waste. The whole standardization movement has been further expedited by the development of a specialized agriculture which has rapidly changed the marketing of farm products from a problem of local or regional importance to one of national and even international significance."

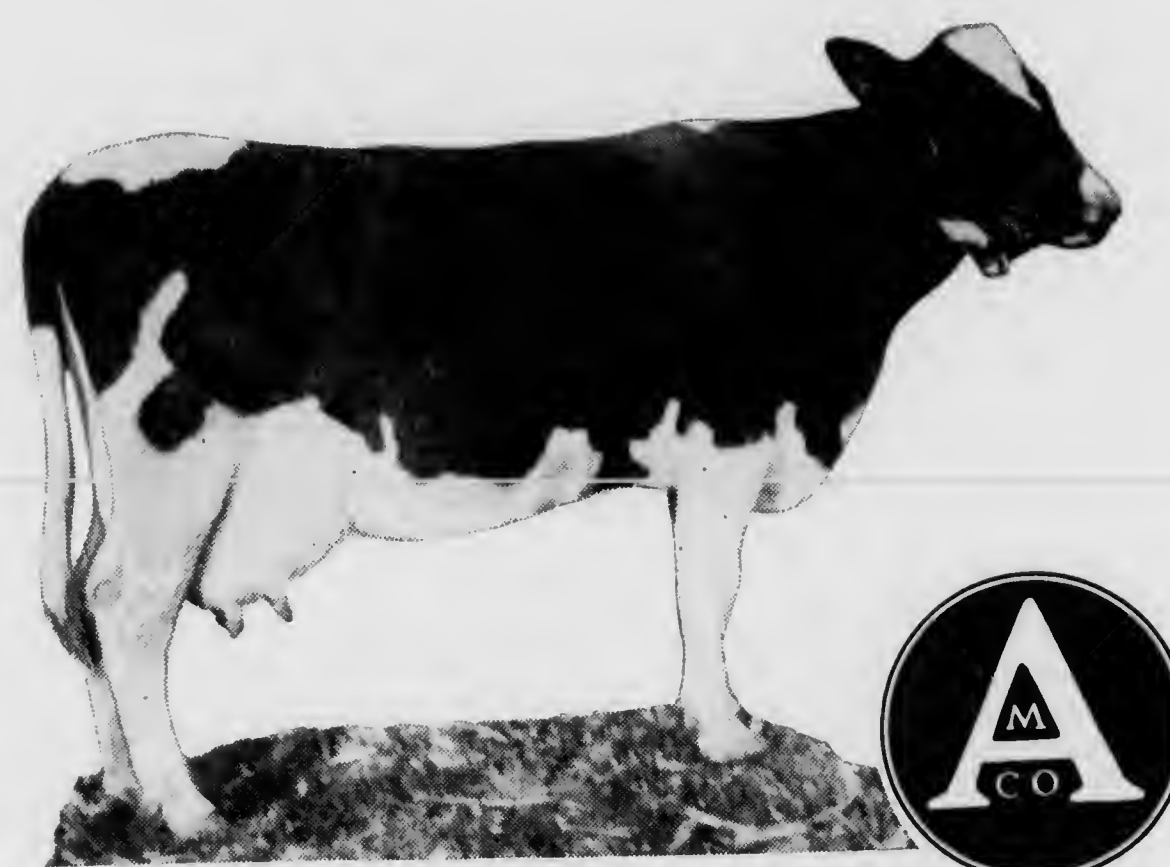
There has been much discussion

among various farm groups as to the profitability of grading agricultural products. On this point, Mr. Tenny says that "whether or not the producer or marketer is paid for the additional effort and expense involved in making such classifications depends upon his subsequent marketing practices. For example, a country merchant seldom establishes price differentials for different grades when buying eggs from producers in very small lots. On the contrary, a large assembler of eggs might find it practically impossible to engage in business through regular trade channels without conforming to recognized grading practices. As a general statement it may be said that the smaller the volume of business the less likely it is that grading to generally recognized standards will pay. In large-scale opera-

tions, however, standardization is now universally recognized as a basic requirement for success."

The bureau has issued standards for 35 different fruits and vegetables from artichokes to watermelons. There are standards for cotton, dairy and poultry products, grain, hay and related products, livestock, meats, tobacco, wool, and containers. Many States have enacted laws providing for the use of the national standards in intra-State trade, and the trade everywhere, whether acting under local compulsion or voluntarily, is using the grades as a practical necessity in the marketing machinery.

Copies of the publication on national standards, which is entitled "Circular No. 8-C", may be obtained on request to the United States Department of Agriculture, Washington, D. C.



One of Mr. DeRocha's leading producers, Meibloom Creamelle Colantha No. 697637. In 304 days she produced 17,190 lbs. milk, containing 574.1 lbs. butter fat.

12,201 lbs. of Milk was the average production per cow in this herd of 27 Amco-fed Holsteins

MR. V. J. DEROGHA, Bristol, Rhode Island, member of Rhode Island Herd Test Association, has fed Amco open formula feeds for over two years—AMCO 20% DAIRY for milking herd and AMCO 12% FITTING RATION for dry cows and growing heifers.

His cost of producing milk for the entire year was less than 3 cents per quart, some months less than 2 cents

With alfalfa and clover hay feed
AMCO 20% DAIRY
With timothy or mixed hay feed
AMCO 24% DAIRY
With home-grown grains mix
AMCO 32% DAIRY

The herd test association record book shows that last year he had 27 producing cows in his herd, of which only 19 were milking 8 months or more during the year and 6 of these were heifers. The average production per cow was:

Milk per cow.....	12,201 lbs.
Butter fat per cow.....	396 "
Roughage cost incl. pasture.....	\$ 72.09
Grain cost.....	89.48
Total feed cost.....	161.57
Value of product above cost of feed.....	371.13
Return per \$1 expended for feed.....	3.30
Feed cost per pound butter fat.....	.40
Feed cost per 100 lbs. of milk.....	1.32

AMCO

FEED MIXING SERVICE

AMERICAN MILLING COMPANY
Executive Offices: Peoria, Ill.
Plants at: PEORIA, ILL.; OMAHA, NEB.; OWENSBORO, KY.
Alfalfa Plants at: POWELL, GARLAND, and WORLAND, WYO.
DIVISION OFFICE: MUNCY, PA.

Economic Aspects of T.B. Testing

Dr. J. B. Reidy, U. S. Veterinarian, Harrisburg, Pa.

There are approximately two million herds, containing nineteen million cattle in the country at present, under supervision by State and Federal Governments for tuberculosis eradication, and this number is one-half the cattle in the country. The cattle owners representing these cattle buy replacements from tested herds only, so that owners of untested cattle have lost this immense market for their cattle, while the market for tested cattle is unrestricted, thereby placing a premium on cattle from tested herds.

It is conservative to state that the market value of cattle in modified areas is increased \$10 per head over the same class of untested cattle. At the present time there are 420 modified accredited areas in the United States. Allowing 20,000 cattle to the county, there would be 8,400,000 cattle in these modified areas, and the increased market value of such cattle would be \$84,000,000.

A total of 874 cities and towns, including some of the largest in the United States, have ordinances requiring the tuberculin testing of cattle furnishing milk for consumption. Fourteen states have taken action requiring the tuberculin testing of cattle.

Defiance County, Ohio, recently obtained entrance to the Chicago market and approximately \$350,000 per year is returned to farmers from this market alone. Being an accredited area, this county was able to comply with Chicago's Health Ordinance. From the above data it is evident that the owners of untested cattle are denied many of the milk markets of the country, thus giving a marked monetary advantage to the dairyman who has tested cattle.

Economic value of T.B. testing to the hog industry is testified to by an Iowa packer as follows:

In 1919 the average loss per hog caused by tuberculosis infection was 75 cents, in 1920 the loss declined to 66 cents, in 1921 to 49 cents and in 1922 to 32 cents. Since 1923 the loss has further declined to 26 cents.

In Wapello County, Iowa, hog breeders have been getting a premium of 10 cents per hundred pounds on all hogs sold. Approximately \$17,000 has been paid in premium money to farmers in the county because their county was in the modified accredited area. The total cost of testing was \$8,689.

The meat packers are paying nearly \$200,000 per year as premiums above actual market on hogs from accredited counties in the corn belt.

Dr. S. E. Bruner, Chief of the Tuberculosis Eradication Division of the Pennsylvania Bureau of Animal Industry, sent a questionnaire to 42 counties in Pennsylvania where considerable tuberculin testing had been done, for information as to the value of the work. The answers stated that the following results had been obtained; viz,

Dairy improvement was noted, consumption of milk had increased, the sale of excess cattle from tested herds showed an increased price over untested cattle, an increased number of calf clubs was organized which would not have been done with untested animals, many owners are starting to raise pure bred stock and eliminate the scrub sire, and a better sanitary condition of barns prevails. Cow testing associations for pro-

duction are formed in the T.B. tested areas, and the T.B. test has had a beneficial influence upon all phases of the dairy and breeding industry in Pennsylvania.

T.B. testing is good business from an economic angle because it detects diseased animals that if left in the herd would contaminate each individual animal of such a herd.

As an illustration: A few years ago a farmer shipped into the abattoir, thirteen purebred cattle which had reacted to the tuberculin test, and on post-mortem examination these cattle were found to be badly diseased. I asked this man where he thought the infection came from or how it was introduced into his herd, and his reply was that he had purchased an untested cow five years previous, and this animal probably spread the infection through this herd. He based his suspicions on the fact that soon after this added animal joined his herd the milk production was lowered, and some of these fine milkers soon became boarders instead of earners. He tried to fatten some of these non-producing animals and found that they would not take on flesh even if well fed, so finally one was slaughtered and the veterinarian who examined the carcass said it was a bad case of T.B. and advised the owner to have his remaining animals tested, which was done and the whole herd condemned.

It seems from the history of this case that had the added cow been tested five years previous, it would have been found tuberculous and the remaining twelve cattle saved from this terrible menace. The cost of testing this cow, compared with the saving of twelve cattle represents in a partial way the loss caused by not testing, or the gain that might have been made if a T.B. test had been given.

The cold economic loss of this herd was greatly added to by the discouragement experienced by this live stock farmer, as his life's work was undone by the T.B. germ.

What the tuberculosis germs did to this particular herd is just an example of what would happen to the live stock industry if no T.B. testing was done. It may be safely stated that tuberculosis would eradicate the live stock industry if we did not eradicate it.

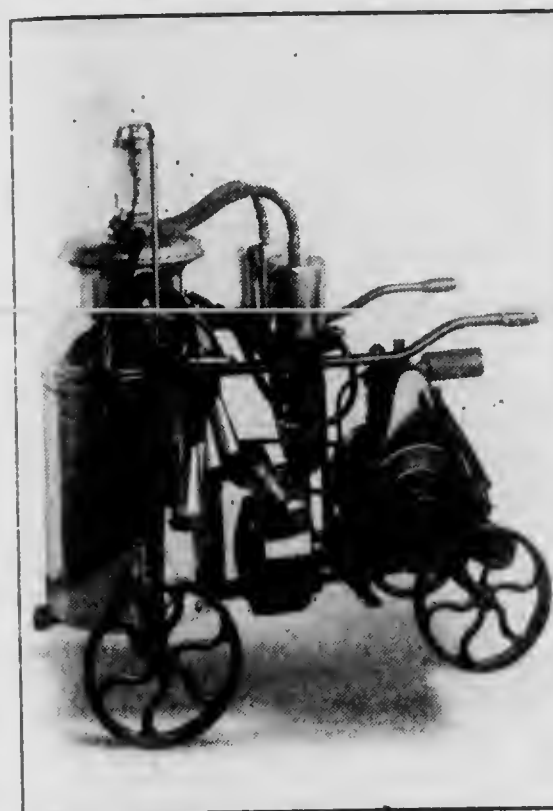
The consuming public is willing to pay good prices for milk of quality, and milk from cattle free from tuberculosis is, therefore, in much greater demand and brings better prices than other milk. I was located in the State of Maine for a few years in tuberculosis eradication work and noticed the constant demand of consumers for milk from tested cattle.

Maine is the summer playground of the Northeast, and many boys' and girls' camps were located in that State, and in every case these camps demanded milk from cattle free from tuberculosis.

The City of Chicago now requires all milk entering that City to come from T.B. tested herds, and as you know that city is one of the largest consumers of milk in the world.

Consumers are demanding more and more that their milk supply come from healthy cattle, and since they are the customers of the dairyman it is good business to furnish the kind of an article they demand.

AT LAST Guesswork and Overmilking ELIMINATED WITH



The DUPLIX VISIBLE Automatically Controlled MILKER

When milk stops flowing vacuum is shut off automatically.

HAND, GAS ENGINE
or ELECTRIC

No pipe lines — no pulsators — no regulating valves — no constant vacuum. The DUPLIX VISIBLE is easier for the cow because of its complete release between each stroke.

Easy to operate, easy to clean.

"My two children, age twelve and fourteen years, milk fourteen cows, clean the machine and care for the milk. I can recommend your milking machine. Its operation is very simple."
VAN MATTESSON,
Friendship, N. Y.

A SPECIAL OFFER NOW

To only One actual Dairyman in each community to introduce this simplest, latest and best development in milking machines.

Whether you have ever thought of buying a milker or not, get confidential offer.

Send in the coupon today. Don't wait. A two-cent stamp may mean hundreds of dollars to you but you must be an actual milk producer. The first reputable, responsible party who answers will be glad he did.

Send Coupon Now and get "What Users Say" and our special low price proposition before someone "beats you to it."

Bath Mfg. and Sales Corporation
Bath, N. Y.
Please send me (without cost or obligation) your circular "What Users Say" and your SPECIAL OFFER which I agree to consider confidential.

Name.....
Address..... State.....
R. F. D. No.....No. cows milked....

Livestock Statistics

in New Jersey

The New Jersey Department of Agriculture has recently published some interesting statistics regarding the total number of livestock on farms and their value as of January 1st, 1928, in comparison with that of January 1, 1926 and 1927.

LIVESTOCK ON FARMS			Value Per Head
	Total Number		
Horses.....	1928 52,000	1927 54,000	\$109.00
	1926 54,000		107.00
Mules.....	1928 5,000	1927 5,000	118.00
	1926 5,000		114.00
Milk cows, 2 yrs. and older.....	1928 123,000	1927 119,000	125.00
	1926 123,000		110.00
Milk heifers, 1 to 2 yr.....	1928 16,000	1927 15,000	12.00
	1926 12,000		10.83
All cattle.....	1928 161,000	1927 157,000	106.80
	1926 154,000		94.80
Swine.....	1928 62,000	1927 60,000	17.00
	1926 56,000		21.00
Sheep.....	1928 5,000	1927 6,000	12.20
	1926 6,000		11.80

Perhaps the outstanding feature of the above table is that the value of the dairy cows, two years old and older, on New Jersey farms has increased steadily over the three years shown at a rate averaging nearly two million dollars per year regardless of whether the number of cows on farms fluctuated up or down. If the 1925 figures were included they would show a value of \$9,225,000. The increase in total value of cows in New Jersey has been \$6,000,000 or about 65 per cent in a period of three years. Milk prices have tended upwards and the dairy industry seems to be on the road to prosperity. Swine prices are down considerably over last year, probably as a result of the low corn prices a year ago. The number of horses is decreasing. This may indicate further abandonment of farms or sales for real estate purposes or increased use of motor power. Probably both factors play a part.

What Happens to a Bucket of Milk

This is what happens to the average bucket of milk which the average farmer brings in from the average cow in this country: 46.7% of it is used as whole milk and cream; 35.9% of it is made into butter; 3.7% into ice cream, while 3.6% goes into condensed and evaporated milk and the same amount into cheese. All the calves in the country get 5.3% of it. Three per cent not fully utilized, while 2% is used for other by-products. Nearly all of this bucket of milk is consumed in the United States in some of these forms.

"The tragedy of what happens to any average quantity of many raw materials is that a certain per cent is wasted through inefficient production or lack of ready market," says Dr. C. W. Larson of the National Dairy Council. "Milk is so completely a product which has no waste elements in it that it is all the more unfortunate that a single drop of it should be lost while there are children who are malnourished and underweight. In the housewife's increased interest in recipes which use sour milk and in her use of milk in this form, those of us who are interested in the nutrition value of milk see a chance to reduce the per cent of this waste."

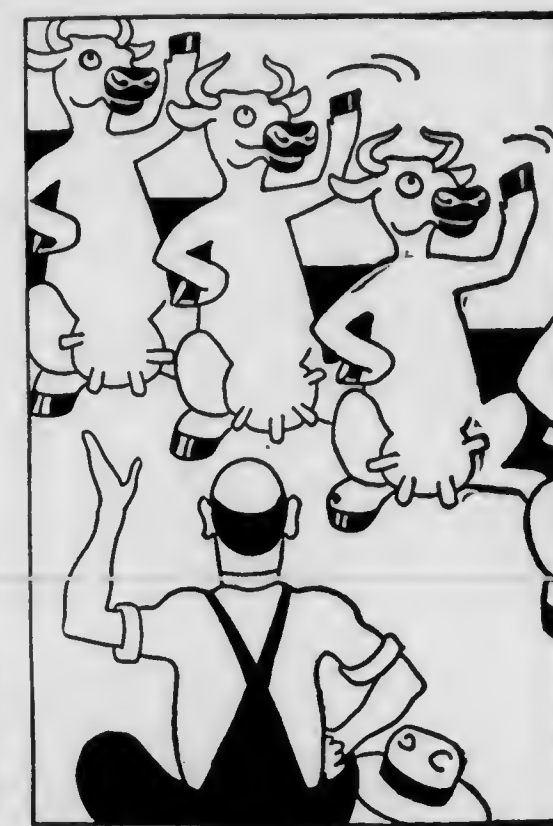
Insure the health of your cows

SUCCESSFUL dairymen keep only those cows that are above the average in production—and feed them liberally. When well fed a cow can not only produce the largest profit, but she then has a physical resistance that protects her from many of the diseases to which cow flesh is heir.

Feeding with the measure full, rather than skimped, is one method of insuring a high level of health for your herd. Such feeding reduces calving troubles, eases udders, harsh coats and tight skins to a minimum. As a result the cows enjoy life and respond by heavy milk flow that is maintained month after month throughout the year — and that means profitable dairying.

There is a vast difference in feeds. The more some kinds are used, the less milk is produced and the more trouble there is with the cows. If the feed is lopsided, if the proteins and other nutrients are difficult for the cow to handle, not only does she fall off in her milk flow, but she loses weight, becomes hidebound and gets out of condition generally.

The best insurance a dairyman can take out for his cows is a scientifically balanced



grain ration—UNION GRAINS. Feed UNION GRAINS regularly, liberally, and you will be repaid in the improved health of your cows and the increased milk yield. Fine coats, loose skins, bright eyes, no udder or calving troubles, heavy production and a calf every year are the results of feeding the oldest and best of all dairy rations—UNION GRAINS. Your dealer sells it.

UBIKO Dairy Service Bulletin Free

We will send our new bi-monthly publication, the "UBIKO Dairy Service Bulletin," regularly to dairymen who ask for it. Each issue will contain a helpful article on some phase of dairying written by a recognized authority — also other up-to-the-minute information regarding feeding, health, etc. Write today.

THE UBIKO MILLING COMPANY, Dept. L-15, Cincinnati, Ohio



Makers of UBIKO World Record Feeds

UBIKO 32 Ration (32% Protein). For mixing with home-grown grains.	UBIKO Horse Feed
UBIKO Special Dairy Ration, 20% Protein —sweetened.	UBIKO World Record Buttermilk Egg Mash
UBIKO Calf Meal	UBIKO Buttermilk Starting Mash with Cod-Liver Oil
UBIKO Pig and Hog Ration	UBIKO Fattening Mash
	UBIKO Scratch Feed
	UBIKO All-Mash Rations

And other UBIKO Rations

UNION GRAINS

THE FIRST DAIRY FEED MADE

FOR SALE—REGISTERED HOLSTEINS

— by —
Bradford County Co-operative
Holstein-Friesian Association

Through this Association, there is now available for sale registered Holsteins of all ages, both sex, many excellent cows. Most cattle are from accredited Herds, and all are Tuberculin tested. Cow Testing Association, private and official records are available as evidence of producing ability. Breeding of the most popular and dependable blood lines. Buyers provided with most painstaking services for selection and shipment.

Address all communications to

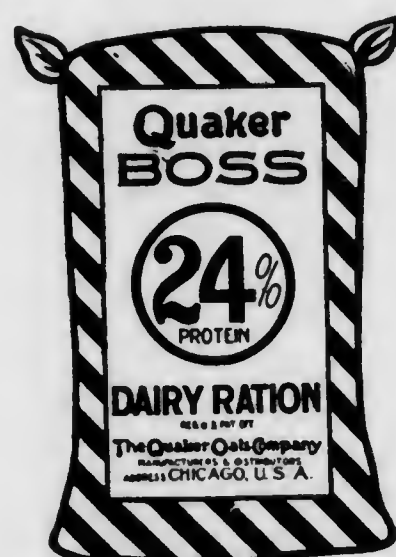
J. G. KERRICK, Sales Manager, TOWANDA, PA.

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Write for color Cards and Booklet "Paint Pointers"
EUGENE E. NICE COMPANY, Inc., PHILADELPHIA

There's Money for You in This Sack



When you buy Quaker Boss Dairy Ration you get the very finest combination of the choice ingredients that are essential to maximum milk production. There's profit for you in every sack. Use Quaker Boss for your grain ration; make more money from every cow. It is the ideal supplement for your hays, silage, and other home grown roughages. See the Quaker Dealer near you.

Made by
The Quaker Oats Company
CHICAGO, U. S. A.

Manufacturers of a complete line of live stock and poultry feeds—look for the striped sacks

Quaker Sugared Schumacher Feed

Just the feed for combining with Quaker (16%), or Quaker Big Q (20%), or Quaker Boss (24%), or any high protein concentrate. Sugared Schumacher is a choice feed for young or dry stock; and a splendid fattening ration for steers, lambs and swine

29 Per Cent of Penn State Agricultural Graduates on Farms

Information supplied by Dean R. L. Watts to Doctor E. H. Shinn, of the United States Department of Agriculture, in a national survey on the subject of agricultural college education, reveals 29 per cent of the Penn State school graduates engaged in farming. This is higher than the average for 19 state colleges, which is 27.8 per cent. No other type of work has drawn so many agricultural college graduates, despite the prevalent opinion among the uninformed that few college men return to active farm life.

Eighteen per cent of the agricultural graduates of Penn State are engaged in teaching which is considerably below the

24 per cent average for all colleges reporting. Extension work has drawn 15 per cent of the graduates in Pennsylvania and only 8.4 per cent at large. Seven per cent of the Penn State graduates are in research work compared to 5.8 per cent for the country. The remaining 31 per cent of Penn State men are in miscellaneous pursuits.

Kansas reports the largest proportion of graduates returning to the farm, 50 per cent. Florida leads in research with 12 per cent of its graduates so engaged. North Carolina has 37 per cent of its graduates in teaching. Georgia has the largest percentage in extension work, 26 per cent.

Migrants to and From the Farm

An analysis of migration to and from farms has recently been made by C. J. Galpin for the U. S. Bureau of Agricultural Economics. Information was secured from 2,745 former farm operators who had moved to cities or villages within recent years, and were scattered throughout the United States. At the time when they left the farm 84 per cent were owners and 16 per cent were tenants. More than half of the migrants still own their farms. On the average there were one or two children in the city or village home of the migrants. These migrants were mainly farmers of long experience and had operated moderately large farms. About half of them had tried other occupations besides farming. There were foreign born and American born among them. One-third of the migrants said they left the farm because they could not make ends meet. One-fourth left because of physical disability. Unsatisfactory school opportunities for the children was the most important reason for 10.9 per cent. One farmer out of forty left because he felt financially able to live in the city.

The study of persons who moved from cities, towns or villages to farms, which included a smaller number of persons, showed results interesting by contrast. Letters of inquiry were sent to 1,000,000 persons and 1,167 of them replied. They were scattered over all the states but three, though more than a quarter of them lived in Pennsylvania, New York, Missouri and Michigan. Of the total number 776 became farm owners, 344 tenants, 47 hired men. Only 13.3 per cent had had no previous farm experience. These migrants were men in the early prime of life who had, on the average, two children. About two-thirds of them were making a better living on the farm than they could in the city. The main reasons for leaving the city were to secure more healthful living conditions, lower costs of living, rest from city life, and the greater independence of the farm dweller.

College Cow Makes Remarkable Record

Penstate Homestead Jolinanna, a purebred Holstein cow, has just completed an enviable record, at the age of two years and eleven months, in the Pennsylvania State College herd. She produced 17,870 pounds of milk and 658 pounds of butterfat in a year, which is nearly four times the production of the average Pennsylvania cow.

Considering her youth—she has just reached her third birthday—the record is still more remarkable. Holstein heifers usually are not bred to freshen until two and one-half years of age. Very few Holsteins have exceeded this college-bred heifer in production.

She is a daughter of Sir Robes Pontiac Segis Homestead, a Holstein bull presented to the college a few years ago by the extension specialists of the college and the county agents. He was the sixth prize bull of his age class when exhibited at the National Dairy Exposition in Syracuse, New York, placing above grand champions of the Ohio State Fair and of the Eastern States Exposition for that year.

No one can afford to spend a dollar's worth of time to save a half dollar's worth of goods.

Co-operative Market- ing of Dairy Products

Dairy products to the value of \$640,000,000 were sold through cooperative associations in 1927, according to an estimate based on reports received recently by the Division of Cooperative Marketing of the U. S. Department of Agriculture. This huge sum is roughly divided among the several types of cooperatives as follows: Creamery associations, \$250,000,000; milk-bargaining associations, \$205,000,000; milk distributing associations, \$140,000,000; cheese factories, \$33,000,000; cream stations, \$12,000,000.

Heavy gains in the volume of business handled were made during the year by the creameries, the milk-distributing associations. One group of creameries in the Minnesota-Wisconsin dairy section reported sales for 1927 more than \$6,000,000 larger than for 1926.

Some very large increases in gross sales were also reported by the milk-bargaining associations operating in a number of the larger cities. Several of the milk-distributing associations also made substantial gains in gross sales in 1927.

Many of the creameries and cheese factories bought farm supplies for their patrons, the value of which would increase the total volume of business by several millions of dollars.

Measured by value of dairy products sold cooperatively, the leading states in 1927 were: New York, Minnesota, Wisconsin, Massachusetts, Iowa, Pennsylvania, Michigan, and California, in the order named.

The leading states in cooperative making and marketing of butter were: Minnesota, Wisconsin, Iowa, and California. States leading in cooperative marketing of cheese were: Wisconsin and Oregon; and the states leading in milk marketing were: New York, Ohio, Massachusetts, and Pennsylvania.

On January 1, of this year, 2,479 co-operative associations engaged in marketing dairy products were listed by the United States Department of Agriculture. These associations were classified as follows: creameries, 1,390; cheese factories, 751; milk-marketing associations, 119; cream stations, 102; milk-bargaining associations, 40; miscellaneous enterprises, 77.

Know the Value of Your Timber

It pays to know the volume of timber in a farm woodland before making a sale, says the Forest Service, United States Department of Agriculture. If the farmer does not know how to estimate standing timber, he would do well to call in expert assistance, which can often be obtained through the county agent or State extension forester. The value of such an estimate is shown by the experience of a woodland owner in Williamson County, Tenn. The highest bid which he received for his tract of hardwood timber before it was estimated was \$2,700, which he was inclined to accept. However, he employed an experienced cruiser to estimate the timber and assist him in finding other bidders.

Within three months the tract was sold for \$6,500, half in cash and half due in six months. The cruiser charged \$500 for his services, and the owner thus netted \$6,000, or \$3,300 more than he would have obtained without securing assistance.

Dairy Herd Improvement Through the Dairy Sire

(Continued from page 1)

2,000 bulls used in herds throughout the country show that the average of them increased production of their daughters over that of their dams until the level of about 350 pounds butterfat a year was reached. After that these bulls decreased production. In Pennsylvania some 3,000 recent records of dairy-herd-improvement association cows show the butterfat production to be nearly 300 pounds a year on the average. The surest way to maintain this level and to carry it higher is, in so far as possible, to use bulls which have demonstrated their ability to increase the production of their daughters to and above this level. These facts add a very important feature to the possibilities for usefulness of dairy-herd-improvement associations, that is, they show that bulls should be tested for efficiency as well as cows.

A very great opportunity for increasing production of dairy cows, therefore, lies in extending the use of bulls that have demonstrated their ability to increase production. This means that bulls will have to be kept until about 5 years of age before their real value can be ascertained through testing their daughters, and furthermore, it means that the records of both the dams and daughters must be kept.

During the some 22 years of dairy-herd-improvement association work in this country, the testing of bulls by comparing the records of their daughters with those of the dams of the daughters received little consideration until comparatively recently. From records available from a number of States having dairy-herd-improvement associations the average life of approximately 200 bulls used in the herds of these associations was shown to be less than 5 years. It is common knowledge that many bulls are disposed of before the production of their daughters is available to determine the real value of the bull.

When the value of bulls is found by comparing the records of their daughters with those of the dams of the daughters, the problem naturally arises as to how they are to be kept alive and used as long as serviceable. It is evident that one breeder can not keep a bull indefinitely even though he were ever so good a producer of high-producing heifers. One great objection raised by farmers, and very justly so, is that old bulls grow very dangerous and are a menace. Fire is a menace and certainly will destroy a man's property, but all of us make provision for controlling fire and consequently obtain its benefits. The same principle can be applied to bulls.

Old bulls must be exchanged, and the bull association work which has made such fine progress in Pennsylvania offers a means whereby farmers in dairy-herd-improvement associations may exchange bulls. The bull association principle can be applied to take in wide areas. For instance a man in the northern part of a State who has a bull that has demonstrated his ability to increase production may effect an exchange with a man in the southern part of a State who also has a bull that has similarly demonstrated his ability. Dairy-herd-improvement association work makes it possible to test bulls, and the bull associations make it possible, in a practical way, to preserve their usefulness after they are found by testing to be worthy.

An address presented by Mr. McClain, of the Bureau of Dairying, U. S. Dept. of Agriculture, at the annual meeting of the Pennsylvania Dairymen's Association.

NOW you can afford a real tubular, high pressure cooler

At last you can purchase a cooler of the highest efficiency and durability with considerably less money than ever before possible. The Oriole Cooler deals a smashing blow to the high cost of genuine tubular coolers for the dairy farm. Every dairyman can now afford a cooler of this type—the Oriole.

Due to unique methods of manufacture we finally have the ideal cooler the dairy industry has been waiting for—a cooler with Rolls Royce durability that sells at Ford prices! There will be no excuse now for milk losses resulting from improper cooling.

Tubular Coolers Endorsed as Most Efficient
Quality control associations, inspectors, health officials, agricultural colleges: all authorities agree that the tubular type of milk cooler, which employs cold water circulating under pressure through the tubes, while the milk flows down over the outside, is the most efficient and desirable kind of cooler for the dairy. The Oriole is the type of cooler most easily kept clean and sanitary and is genuinely tubular.

Guaranteed in Every Respect
The Oriole is guaranteed without restriction against imperfect workmanship or materials. Every cooler is further guaranteed to withstand without leaking a pressure of 75 pounds to the square inch. If you have been a user of other circulating coolers you will appreciate this guarantee.

Make Your Last Cooler Purchase Now
Once you have an Oriole there will be no necessity to ever replace it, for it is built of copper and bronze throughout—everlasting metals. Nothing can rust out; nothing can wear out and the workmanship employed in making this cooler is absolutely unsurpassed.

Which Size Should You Buy?
Oriole coolers are made in two sizes. Size A cools 25 gallons of milk an hour and size B cools 50 gallons an hour. Both sizes consist of 1½" diameter seamless copper tubes spaced so that cleaning between them is easy. A lip, so that cleaning between them is easy, runs along their under side, providing a guide for the flow of milk from one tube to the next. The water of milk from one tube to the next.

flows through these V-shaped flanges as well as the balance of the tube interior so that all possible cooling surface is utilized. This space is "dead metal" space on other tubular or corrugated coolers. Upper and lower troughs are removable without use of tools. Reservoir, troughs, and all other parts have only smooth round tinned surfaces—no square corners hard to keep clean.

Capacity	Ht. Cooler	Length	Shipping Weight	Capacity Reservoir
Size Gals. Hr.	Reservoir	Overall	Weight	
A 35	33"	21½"	70 lbs.	10 gal.
B 50	33"	31½"	85 lbs.	10 gal.

Sour Milk Losses Would Buy An Oriole
Most losses are due to improper cooling. With the Oriole you will always cool sufficiently low—quickly. A few days' losses would amount to it back at our expense. Your money will be refunded without question. No offer could be fairer than this.

Inspection Free
Order an Oriole Cooler, unpack and set it up. Inspect it thoroughly. If the design, workmanship and quality does not meet your approval entirely pack the cooler up again and ship it back at our expense. Your money will be refunded without question. No offer could be fairer than this.

Remember our unlimited guarantee and this free inspection offer. You risk nothing. Order your Oriole today.

CHERRY BASSETT CO., 2324 Market St., Phila., or Russell and Ostend Sts., Baltimore

\$34.50
Large Size
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FOB Balto.

SOLID COPPER TANK
SOLID COPPER TROUGHS
SOLID COPPER TUBES
CAST BRONZE HEADERS
COATED ALL OVER
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**The Cooler that lasts
a LIFE TIME**

Oriole Milk Cooler

HIGH PRESSURE NO LEAKS

100-Real Dairy Cows-100
On Hand at All Times



Tuberculin tested. Guernseys, Jerseys and Holsteins from accredited herds. Priced to sell. Carload lots a specialty.

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WEST CHESTER, PA.

For Sale

High Test Seed Corn
White Cap Yellow Dent
Sure Crop Lan. Co.
Clouds' Yellow Dent and
Golden Queen
MT. JOY SEED CO.
Mt. Joy, Pa.



Dr. McCollum Cautions Against Nutrition Fads

"Enthusiastic Americans who are interested in ultra-violet rays are irradiating hens to make them lay more eggs; they are irradiating cows to make them produce a substitute for cod liver oil; and they are irradiating people for almost anything," said Dr. E. V. McCollum, Johns Hopkins University, in surveying new developments in the field of nutrition at a lecture given recently in Philadelphia under the auspices of the Home Economics Association of that city and the Philadelphia Inter-State Dairy Council.

"We seem to have an idea that if a spoonful of anything is good, a tubful is better," was his comment. "It was in 1904 that it was first definitely stated that sunlight had a beneficial effect upon the faulty bone development known as rickets. People in the far north, where sunlight is at a premium, do not have rickets due to the fact that they eat fats and fish oil, while it is common in those tropical places where cloudiness is almost the rule.

"Unfortunately the sunlight which we get in smoky cities has little value as the smoke has absorbed the desired rays," said this scientist. "It is in some of the industrial cities in the United States that the worst prevalence of rickets is found."

Dr. McCollum, who has devoted many years to research in the School of Hygiene and Public Health at Johns Hopkins University, and who is the author of "Food, Nutrition and Health" and other books stated, "Anemia has been receiving much attention lately from students in research." Dr. McCollum reported that various experiments along this line have been conducted at the University of Wisconsin. A study has been made of iron assimilation in rabbits made anemic by being fed an iron free diet. Recovery was rapid when these rabbits were given iron oxide and lettuce leaves. Cabbage and yellow corn proved less effective. More recently ash of liver has been found important in producing recoveries.

"The public is now keenly awake to the unquestioned soundness of the modern nutritional program," asserted Dr. McCollum. "In the future we are going to hear more about the quality of food and little about counting calories. "Americans are eating more sugar than anyone in the world ever ate before. We are eating more cereal products than our ancestors ate in the past except perhaps the Egyptians. It is, therefore, particularly necessary that the remainder of the diet should be rich in the important things which sugar and cereals do not supply."

Dr. McCollum named as protective foods—milk and leafy vegetables. "We can greatly improve our diet by eating more of these protective foods."

Milk Drinking

"Once upon a time milk was supposed to be food solely for babies. What the human babies couldn't use, might go to the young of other species, but as a beverage for adults, milk hardly was mentioned.

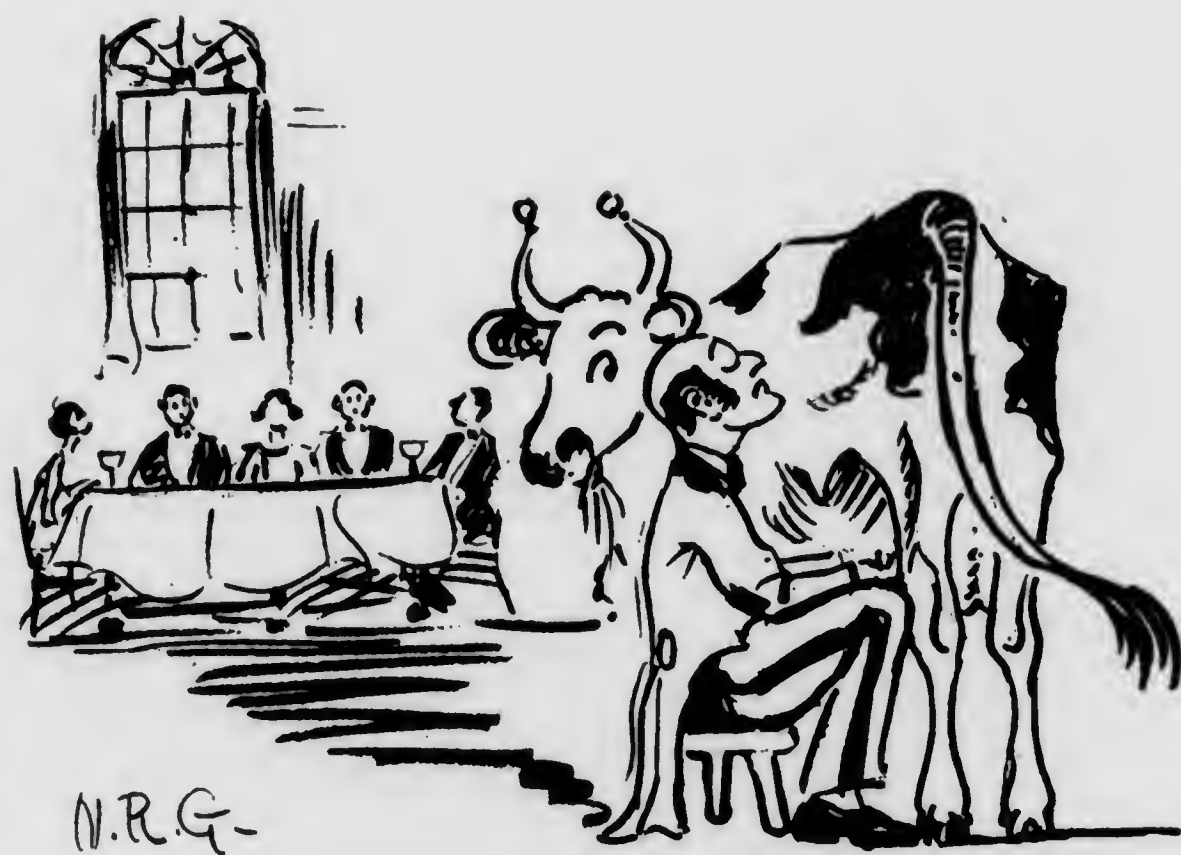
"Then began an era of public education sponsored by dairymen, nutrition experts, health officials and physicians. If anyone doubts the power of propaganda, when making known the merits of a good article, let him watch the milk statistics.

"Everybody learned that there is an intimate relationship between milk consumption and health. Milk is better than tea or coffee. Milk makes strong bodies and clear minds. Milk steadies

the nerves. Milk keeps the teeth from falling. Milk is a fine bracer for the laboring man. Milk is cheaper than meat and compares favorably with eggs and many other staple foods.

"And when the people came to understand and to believe these things, they began to buy more milk. Figures representing the increased demand are hard to comprehend. The production of milk in this country in 1926 was greater than that of 1925 by 4,000,000,000 pounds. The statistics are those of the United States Department of Agriculture. The greater part of this increased consumption was in the homes of city people."

—Detroit News; reprinted in "The Normal Instructor".



"HAPPY-ISMS"

Let the cow be a member of your family
If the folks would only fight over milk as they do over politics, this would certainly be a great country

Find Health Prayer in Excavations of English Cathedral

A "Healthy Prayer" that has been found on the wall in Chester Cathedral, England, contains real mental hygiene for modern Americans.

In the quaint little town of Chester with its streets which the Romans excavated ten feet below the houses so that each gabled home has to be reached by steps, this prayer was recently found:

Give me a good digestion, Lord,
And also something to digest,
Give me a healthy body, Lord
And sense to keep it at its best.

Give me a healthy mind, good Lord,
To keep the good and pure in sight
Which seeing sin is not appalled
But finds a way to set it right.

Give me a sense of humor, Lord
Give me the grace to see a joke.
To get some happiness from life
And pass it on to other folk.

It is interesting to note that the town where the prayer originated is the main city in Cheshire County, famous for Cheshire cheese. Evidently, these people who realize the value of dairy products in their home diet were a few hundred years ahead of their time in their well-rounded health ideals, knowing that success in life would come to those who have a happy, tolerant frame of mind and give their bodies something nutritious to digest.

Preserve Your Salad Days by Salad Ways

"If winter comes can spring be far behind?"

There is no need to let the spring or salad days of life slip forever into a state of winter. We do not really want to remain young always for there is too much real joy in the winter of life, a mellowing of tones and hues in all aspects of our experiences. But we do want to feel young, to capture that subtle spirit of youth that keeps our interests fresh so that our winter may be sparkling and full of sunshine.

Our food habits, like others good or bad, crystallize in the winter of life unless we watch them. It is hard to realize that mere food has so much influence in helping us to capture this feeling of youth and well being.

But it has, and thereby hangs the tale. Preserve your salad days by salad ways. Why, even in the winter the markets offer a vast choice of vegetables, fruits, nuts, cheeses and other foods from which the clever homemaker may fashion a great variety of salads.

There are different types of salads, light greens or vegetable combinations for dinner or more substantial combinations of cheese or cold meats for luncheon. Then there are the delightful gelatine salads from tomato or other canned foods.

Raw foods have so much to commend them that it is suggested you try a new salad this week:—

Carrot and Apple Salad

Raw carrots
Crisp apples
Nuts or raisins
Lemon juice
Mayonnaise or boiled dressing

Use equal amounts of apple and carrot. Chop carrots or put them through a meat chopper. Pare apples and sprinkle with sugar and add lemon juice. Chopped nuts and raisins may be added. Mix just before serving with dressing and serve on shredded lettuce.

Mock Fruit Salad

Raw carrots
Fresh grated coconut
Can sliced pineapple

Chop or grate the carrots and mix with the coconut; mix with salt and a little sugar. Cut the pineapple. Before serving combine the two and add a good salad dressing.

Cheese Suggestions

Soft cheese may be put through a wire sieve, seasoned with a good French dressing and used in the centre of a half pear or peach or slice of pineapple. Served on a mound of lettuce this is an attractive salad for luncheon.

Stuffed Prune Salad

Through a lengthwise cut remove stones from large cooked or steamed prunes. Fill with cottage cheese seasoned and mixed with sweet or sour cream. On crisp lettuce leaves arrange stuffed prunes star fashion around a small mound of cottage cheese. Serve with dressing.

Farm and City Women Hold Conference in Philadelphia

"How are women living on the farms and those in the towns and cities working together to improve the present agricultural situation?" was the question placed before the Rural-Urban Conference held in Philadelphia on February 16th.

This conference was called by the Young Women's Christian Association in a belief that the selling problem of the woman on the farm and the purchasing problem of the woman in the city needed to be mutually better understood. It was attended by many actively engaged in various forms of agriculture, urban householders, educational leaders, and by a number of contributing experts.

Among the individual farm difficulties reported at this meeting were those of glutted or disorganized markets, low returns, no cooperation, lack of demand, labor shortage and competition. These instances covered such perishable crops as peaches, apples, cranberries, and vegetable growing. The situations encountered by the city buyer were chiefly of high costs, and no uniformity in quality by direct purchasing.

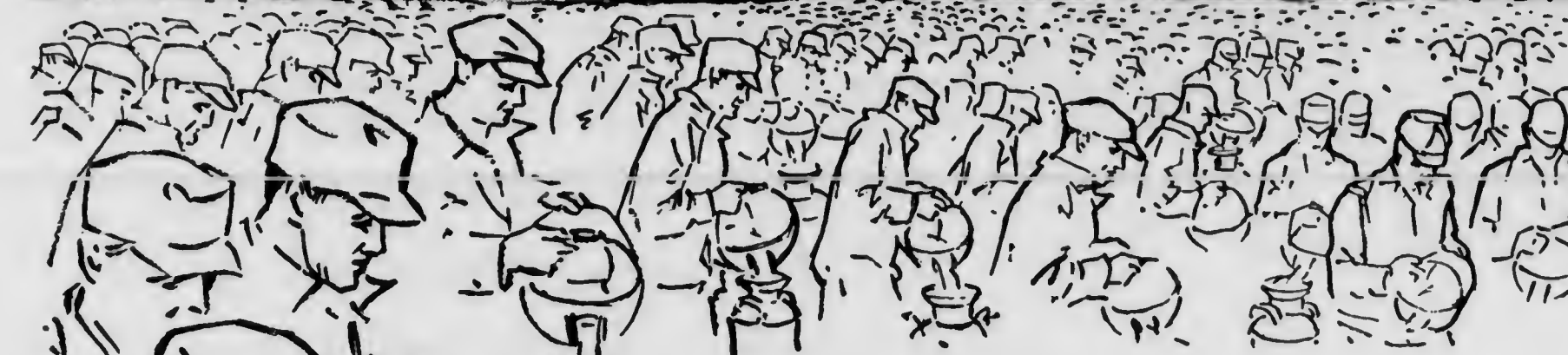
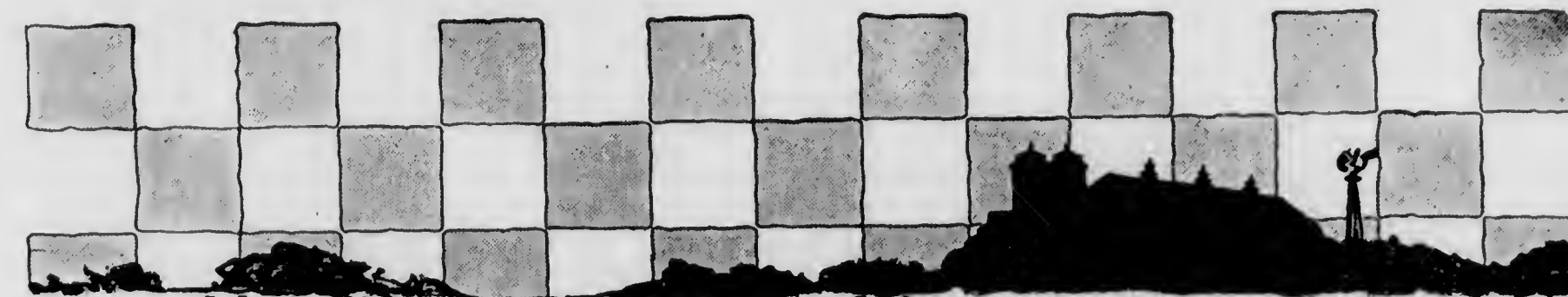
"Who gets the margin between the price which the farmer receives for his product and that which is paid for the same article at the corner grocery store?" was a query from the city woman's point of view.

Dr. Ralph F. Breyer of the University of Pennsylvania answered the pertinent question by outlining methods of distribution. "Either the farmer or middleman must pay the costs in transporting a product from farm to consumer," said Dr. Breyer. "It is possible for the middleman to do it at a lower rate by reason of the quantity in which he deals. It has been estimated that expense of transportation, storage warehouses, and wide area distribution, consume nine-tenths of the ten per cent margin which the distributor receives, thus leaving him a one per cent margin.

"There are two ways for the farmer to secure a better price for his products," stated Dr. Frank App, of the State Department of Agriculture, New Jersey. "One way is by government subsidization. The other is through cooperation in controlling the supply. Many organized producers are already working in this direction. Federal and state governments are offering assistance as far as possible through agricultural departments. An important function of the effective farm marketing organization in the future will be in supplying its membership with marketing information which will enable them to control their production supply."

"The price margin in many products needs to be squeezed out as it has been done in the Philadelphia territory by an organized milk industry," said Mrs. Henrietta Calvin, Director of Home Economics, Philadelphia Public Schools.

Dr. Clyde L. King, Prof. of Economics, University of Pennsylvania, explained that taxes, heretofore, have been levied on land and improvements. There is a limit to the amount of taxation land will support and there is an increasing demand for money to be raised by means of taxation. Eighty-five per cent of our local taxes are spent for schools, highways and welfare; 85% of our national taxes go for wars, past, present



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and future. The three items of local taxation will tend to increase instead of decrease and by our own vote.

The whole subject of taxation will have to be more carefully studied in the future and other means of taxation be found.

The conference closed with suggestions that the group continue the study of marketing. The formation of local study groups will be the best means of spreading this information.

Philadelphia Inter-State Dairy Council


General Offices
219 N. Broad St., Philadelphia

A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value in nutrition.

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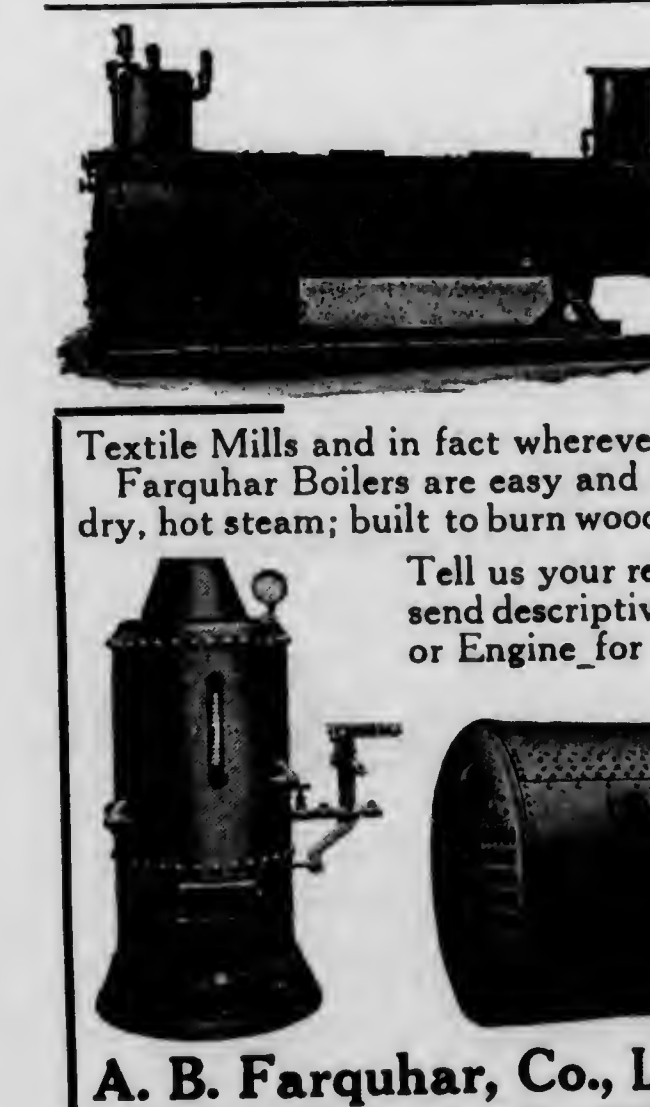
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Dr. Mayo, Famous Physician, Says 25 Per Cent of TB in Children Comes from Tuberculous Cows

Dr. C. H. Mayo, probably the world's most famous medical authority, also health officer and farmer of Rochester, Minnesota says:

"A conservative estimate is that 25 per cent of tuberculosis among children and five per cent of all tuberculosis in humans is from bovine sources."

In a recent letter to a commissioner of Health in the East, a copy of which was received by the Bureau of Animal Industry, Pennsylvania Department of Agriculture, Dr. Mayo writes:

"Tuberculosis in cattle spreads to humans, usually by means of milk in which the germs have not been killed by proper pasteurization. How frequently this occurs is a question; but a conservative estimate is that 25 per cent of tuberculosis among children and 5 per cent of all tuberculosis is from bovine sources."

"Clinical observation and examination of cattle does not always indicate the tubercular animal. In addition tuberculin test should be used, for even if it is not 100 per cent efficient, it is the best method we have of detecting the tubercular animal."

"Opposition to the area testing and compensation plan is sometimes due to the Anti spirit so common among the uninformed but sometimes it is due to hair splitting and unproven or impractical theories of those who know or should know."

"It is to be regretted that opponents to the plan who cannot be classed as just Antis are satisfied to just oppose without proposing some other practical commercially possible plan with the result that just nothing is done."

"Everything should be done—clinical observation and examination of the cattle, tuberculin testing and slaughter of reactors and proper pasteurization of milk. Expense should not be the determining consideration. In fact money spent for such things is not expense, it is investment which will return dividends."

"I submit this statement not only as a Doctor of Medicine but also as a health officer and as a farmer where I have had extensive experience with bovine tuberculosis among cattle in my own herds."

New Jersey Beats Record for Shipment of Fruit and Vegetables in 1927

During 1927, in the state of New Jersey, 18,883 car loads of fruit and vegetables were shipped by rail by various markets and farmers of that state. This exceeds the record of the previous year by 1128 car loads.

This total does not include the vast quantities of perishable products moving by truck or wagon delivery to Philadelphia, New York, or to various marketing points within the state itself.

Among the car load lot shipments made may be included 6,648 cars of potatoes, 1,988 cars of peaches, 1,343 cars of tomatoes, 1,432 cars of sweet potatoes, 811 cars of peppers, 708 cars of apples and 4,652 car loads of mixed vegetables.

Prepare for Spring
Begin to make repairs in machinery that can be done at home. Have all other repairs finished so that all equipment is ready for instant use.

COW TESTING ASSOCIATIONS

Middle Bucks Cow Testing Association

NERVIN WELLER, Tester

During the month of January, 26 herds were tested in the Middle Bucks (Pa.) Cow Testing Association. There were 351 cows in milk and 62 dry. Eight cows were on official test. Three profitable and five unprofitable cows were sold. One pure bred bull was purchased. Forty-nine cows produced over 40 pounds and 25 produced over 50 pounds fat. Forty cows produced over 1000 and 53 produced over 1200 pounds milk.

Highest Herd Average—Milk Production		
Owner	Cows Milking	Lbs. Milk
L. P. Satterthwaite	15	1233
C. P. Powell	7	1231
J. E. Ivins	6	1230
W. M. Hunsberger	14	1142
J. O. Canby	28	1111
C. L. Finney	10	1060
C. L. Wilkinson	12	1034

Highest Herd Average—Butterfat Production*		
Owner	Cows Milking	Lbs. Fat
J. E. Ivins	8	47.2
C. P. Powell	7	43.7
L. P. Satterthwaite	15	41.9

Highest Herd Average Test		
Owner	Per Cent	Breed
J. M. Geddes	5.45	R. Jerseys
P. W. Smith	5.12	R. & G. Guernseys
Bolton Farms	5.05	R. Guernseys
George S. Havens	5.00	R. Guernseys
H. M. Walton	5.00	G. Guernseys

*Cows milking three times a day.

West Chester Cow Testing Association

S. W. STILES, Tester

Report of West Chester Cow Testing Association for month of January, 1928. Herds tested during month, 16; cows in milk, 417; cows dry, 95; cows sold profitable, 10; number sold unprofitable, 4; number pure bred bulls purchased, 2; number replacing grades, 1; number cows producing over 40 lbs. fat, 86; number producing over 50 lbs. fat, 24; number cows producing over 1,000 lbs. milk, 138; over 1,200 lbs. milk, 68; ten highest producing cows in butterfat for month as follows:

Owner	Breed	Lbs. Milk	Per Cent Fat	Lbs. Butterfat
R. F. Brinton	R. Holstein	1655	4.5	74.5
M. L. Jones	Holstein	2058	3.4	70.0
C. H. Marshall	R. Holstein	1590	4.3	68.4
M. L. Jones	R. Holstein	1535	4.2	64.5
Pa. Hos. Farm	R. Holstein	1575	3.9	61.4
M. L. Jones	R. Holstein	1702	3.5	59.6
Wm. I. Reeves	Guernsey	1225	4.8	58.8
M. L. Jones	Holstein	1717	3.4	58.4
M. L. Jones	Holstein	1569	3.7	58.1
M. L. Jones	Holstein	1690	3.4	57.5

Concentrated Fertilizers Save Labor and Freight

Potato growers are finding in the use of concentrated fertilizers an opportunity to save time, money, and labor, says B. E. Brown, soil chemist of the Bureau of Chemistry and Soils, United States Department of Agriculture. By using this new form of fertilizer, 1 pound of which carries as much actual plant food as is carried by 2 pounds of the ordinary kind, they save in freight, in handling, in hauling, and in storage.

The idea of manufacturing fertilizers in the concentrated form was developed by the soil chemists of the United States Department of Agriculture. According to Mr. Brown, cooperative experiments with the Maine Agricultural Experiment Station indicated that the concentrated mixtures on the whole were equal to the commercial kinds. In some cases they gave even greater yields. Yields of Irish Cobbler produced by concentrated fertilizers were as high as 360 bushels to the acre.

There are features connected with the use of concentrated fertilizers, however, that will have to be carefully considered and which will require more study before the free use of such fertilizers can be definitely recommended, under all soil conditions, says Mr. Brown. This is particularly true of light soils.

The dairyman who studies his own methods is more likely to succeed than one who waits for legislation or cooperation to save him.

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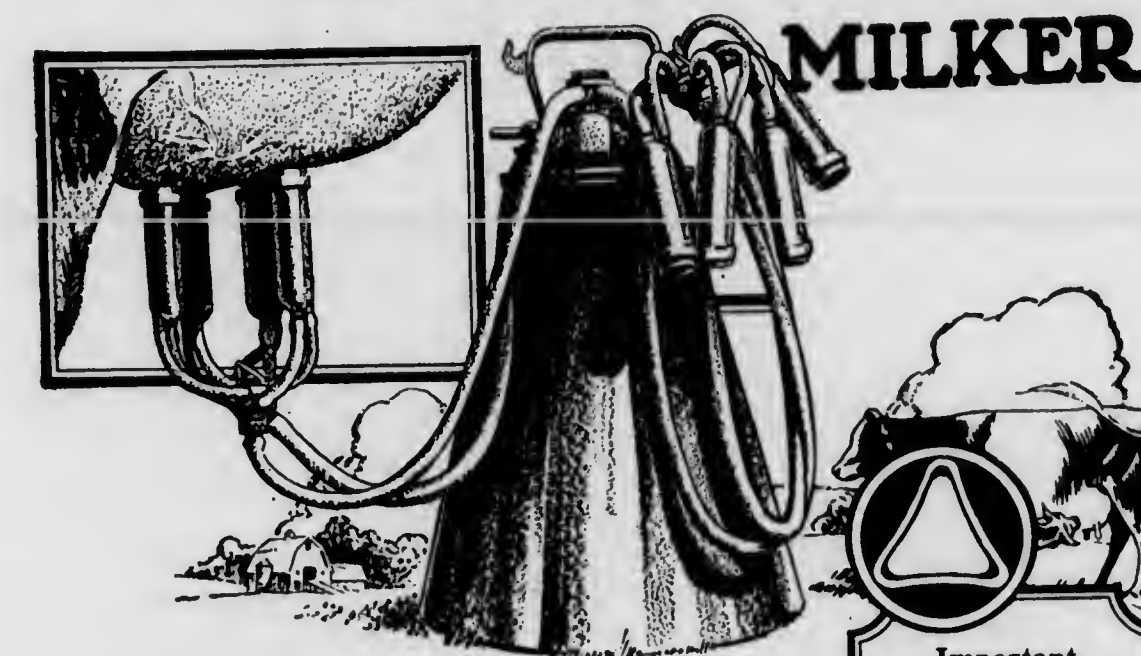
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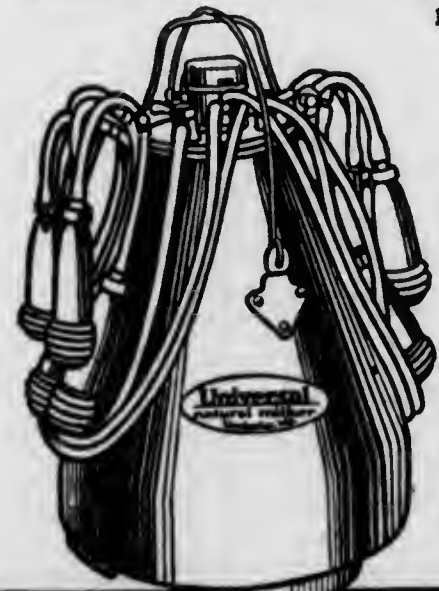
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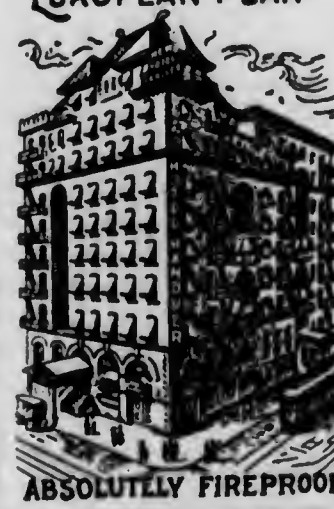
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Joint Meeting of Inter- State Milk Producers' Association and Dairy Council Field Men

It has been shown to be a very valuable feature in the work of the Field and Test Department of the Inter-State Milk Producers Association and of the Quality Control Department of the Philadelphia Inter-State Dairy Council to hold joint conferences each year at some time during the winter when such a conference would not interfere with the field work.

The purpose of such conferences has been threefold: first, and perhaps most important, to acquaint the men with the policies of the organizations which they represent and with the attitude of the organizations toward the major dairy problems of the day; second, to furnish an opportunity for the fieldmen to acquaint the officers with conditions in the field, each one speaking for his respective territory; and, third, for the officers to consider jointly with the men individual suggestions which each may make for the betterment of the work.

Then, too, such conferences furnish an opportunity for the men to report on books which they have read or addresses to which they have listened, as for instance, at the recent meetings held in conjunction with the Farm Products Show at Harrisburg.

Such a joint staff conference was held at the Association's headquarters early in February. The following general program was presented, each subject being discussed by those present.

Some data and the chief points brought out by Dr. E. J. Perry, New Brunswick, N. J., on securing maximum milk production at a minimum cost, by R. M. Dwyer.

Discussion of the address of Dr. F. B. Morrison, Geneva, N. Y., on the use and abuse of protein in the ration for dairy cattle, by Charles Wilson.

Discussion of the address of Dr. Morrison on Minerals in Dairy Rations, by Dr. E. G. Lechner.

Discussion of J. H. McLain, address on dairy herd improvement through the sire, by C. A. Bishop.

Impressions of the Milk Exhibit at the Farm Products Show, by Ben Marsh.

Suggestions for the improvement of

"Dairy Day" and the Pennsylvania Dairymen's Association Banquet, by James Campbell.

Discussion of the Bovine Tuberculosis Eradication Work in Pennsylvania, by F. M. Twining.

Discuss best method for bacterial analysis of milk and milk products, by F. R. Ealy.

Discuss the use of direct microscopical count in the quality control of milk by Wesley R. Holmes.

Special field work in troublesome districts, discussed by C. E. Cowan, M. E. Gelatt and E. P. Bechtel.

What can the Dairy Council do to render better service in the field, by H. D. Kinsey.

What can the Inter-State Milk Producers' Association do to render better service to its members. Clayton Reynolds and T. C. Campbell.

Suggest an outline and model program for farmers' meetings, (a) Inter-State Milk Producers' Association meetings, (b) Dairy Council meetings, (c) combined meetings of both organizations. I. R. Zollers, R. W. Balderston.

What do you consider the best method of handling our "locals" with respect to meetings and units; H. D. Allebach, E. C. Dunning and O. S. Havens.

What we hope to accomplish with our new score card system. C. I. Colice.

What is the best method farmers can adopt to replace cattle lost through the tubercula test? Discussed by John S. Bryan.

Tell where, what and how to get information and statistics to forecast market trends. J. O. Eastlack.

Give some fundamentals of successful salesmanship by Frederick Shangle.

Following each presentation the program presented was fully discussed and a clearer general understanding of the various problems brought out.

Such meetings and discussions have a definite tendency toward moulding the best thought and the best opinion of the various problems and enable those who attended to make a clearer presentation of the problems when confronted with them in their daily work in the field.

1927 Sets New Marks in Cow Testing Work

In 1927, for the first time in the history of Pennsylvania cow testing work, an average butterfat production of over 300 pounds for the whole state was attained, said I. O. Sidelmann, of the Pennsylvania State College dairy extension service. He has just completed summarizing the records of all associations in the state.

A comparison for the past four years reveals 8223 cows tested in 1924; 11,033 in 1925, 12,303 in 1926, and 15,084 in 1927. Average milk production increased 386 pounds per cow during that period and 110 pounds in 1927 over the preceding year. Butterfat production grew from 286.9 pounds per cow in 1924 to 302.3 pounds in 1927. The value of each cow's product averaged \$249.86 last year compared to \$217.59 in 1924.

Feed costs have varied very little during the past four years. From 1924 to 1927 they were \$99.02, \$100.54, \$98.63, and \$100.51 respectively.

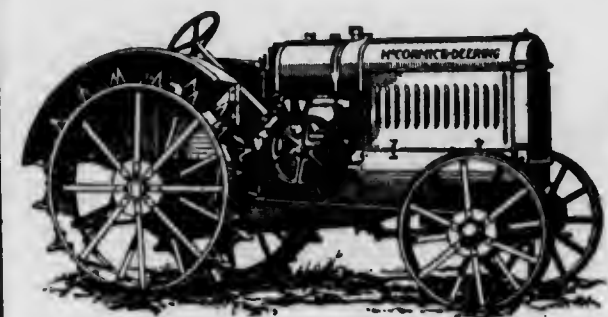
Thirty-two whole associations averaged over 300 pounds of butterfat per

cow and 19 had over 8000 pounds of milk per cow. In 1926 there were 15 of the former and 11 of the latter. There were 542 herds producing an average of over 300 pounds of butterfat per cow compared to 377 the previous year and 301 in 1925.

Fairacres Farm, Allegheny County Association, had the highest butterfat average, 495.9 pounds in a registered Guernsey herd. Roy S. Bowen, Wellsboro Association, had the highest milk average, 15,500 pounds, from a registered Holstein herd.

The best cow in butterfat was a registered Holstein owned by W. H. Landis, Montgomery County Association, which produced 924.9 pounds. A registered Holstein owned by Henry Wilkinson, Wellsboro Association, produced 25,527 pounds of milk for the best milk record.

The Venango County Association attained the highest average in the history of the state, 359.9 pounds. Highest milk production per cow was that of 9751 pounds in the Carbon county group.



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Registering Farm Names

Requests for information on how to register a farm name in order to prevent any other farm owner in the Commonwealth from using the same name are frequently received by the Pennsylvania Department of Agriculture.

The procedure is as follows: Write to the Secretary of the Commonwealth, Harrisburg, for the application blank used in registering trademarks and trade names. In this application, the farmer certifies as to the farm owner, location of residence, the products sold from the farm, the trademark or farm name and how the farm name will be used.

Two copies of the letterhead or other medium carrying the farm name must be sent with the application. The fee for registration is \$5.00.

Report of the Quality Control Department, Philadelphia Inter- State Dairy Council.

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of January, 1928.

No. Inspections Made..	2,178
No. Sediment Test	1,437
No. Meetings Held	7
No. Reels Movies	
Shown	2
Attendance	425
No. Man Days, Fairs and Exhibits	61
No. Miles Traveled.....	15,260
No. Temp. Permits issued up to January 31, 1928	24,727
No. Permanent Permits issued up to January 31, 1928	11,122

During the month 29 dairies were discontinued from selling for failure to comply with the regulations—19 of which were reinstated before the month was up. To date 92,137 farm inspections have been made.

Test Garden Seeds

A simple method of making a germination test of garden seeds is to count 25, 50, or 100 seeds of the sample to be tested and put them between folds of moist blotting paper. Put the paper between plates and place the apparatus in a warm room. Keep moist but not wet. Count sprouted seeds and note rapidity of germination and vigor of the sprout.

Have Better Cows

Recent years have shown a gradual decline of cows in Pennsylvania. With an increased production per cow, however, the total supply is somewhat greater now than before. This indicates a healthy trend and points the way to a better condition in the dairy industry, State College specialists declare.

Put Edge on Tools

A keen cutting edge should be maintained on hoes, wheel-hoe blades, sickles, and all tools used to cut weeds. If they are in bad shape put them on the grindstone or emery wheel; if they simply need "touching up" a whetstone and file will answer the purpose.

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We offer to Flower Lovers with small yards this collection for \$1.00, or 3 collections for \$2.50.
10 Top sized Gladiolus Assorted. 5 Assorted Canna Roots. 1 Peony, Red, White, Pink or Lavender. 5 Assorted Dahlias—all giants. 2 Blue Delphinium. 5 Assorted German Iris. 2 Hardy Mum.

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BABY CHICKS

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Idylwilde Korndyke, purebred Holstein owned by James Seymour & Sons of Ida, Ontario, has just completed her official 305-day test, in which she made the remarkable record of 19,669 lbs. of milk and 819 lbs. of butterfat, with twice-a-day milking. Her butterfat production is a world's record for a Holstein cow, and her milk production is a Canadian record for a Holstein cow as well as third highest record in the world.

This great cow was milked during the second half of her test with the De Laval Milker, and instead of falling off in production she held up in splendid manner with De Laval milking and actually had some of her best days in milk and butter production when milked the De Laval Way. Mr. Seymour says: "The fact that we used your milker on this valuable cow when she was undergoing a test evidenced the confidence we had in it and we feel that it must be given due share of credit for the splendid record Idylwilde Korndyke has made."

The De Laval Milker Aids in Making Another Champion—and Helps Make Cleaner Milk

CLAIMS made for the De Laval Milker are substantiated each day by facts and the enthusiastic endorsement of users who have accomplished their goals with its definite aid. A De Laval Milker was used to milk Idylwilde Korndyke, the champion Holstein recently developed by James Seymour & Sons, Ida, Ont. Records such as hers are conclusive proof that the De Laval Milker does produce more milk by achieving and maintaining the maximum flow, through correct milking, uniformity and gentleness.

Another interesting bit of evidence is offered by the Highland Guernsey Dairy at Roanoke, Va., owned by Mr. Roy C. Kinsey. A De Laval Milker was installed there to provide cleaner milk, better milking, to promote greater yield and to save time and labor. At the end of the first year an interesting and important fact is brought out by a comparison of yearly bacteria count averages. The previous year, with hand milking, the average was 6226; this year, with the De Laval, the average is 1952.

Cases like these speak volumes and back claims made for the De Laval Milker with unassailable proof. Investigate the De Laval Milker thoroughly. It will solve your milking problem. Write the office nearest you or ask to have a De Laval representative call. No obligation.

The De Laval Separator Company

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165 Broadway

CHICAGO
600 Jackson Blvd.

SAN FRANCISCO
61 Beale Street

HIGHLAND GUERNEY DAIRY



De Laval Separator Company,
165 Broadway,
New York, N. Y.

Gentlemen:

We have just finished the first year's use of the De Laval Milking Machine and have found it very satisfactory. The bacteria average for the year was 1952. The average for last year when we were doing hand milking was 6226. We think that everyone in the Certified business should use the De Laval. We do not have a bad udder in the herd.

We are sorry to say that so far we have done no testing officially because we have been so interested in the production of Certified Milk. We do however weigh and test for feeding. We have some very nice young cows that we will test next year. Our bull is a grandson of Langwater Foremost and out of a daughter of Pink which is one of the best producing dams in Virginia. He is registered as "Highland Foremost No. 105077."

We forgot to mention in our last letter that we scored 95.54 in last year's Certified Milk Contest at Washington. The milk was drawn on May 2nd and analyzed on May 15th by a committee from the Bureau of Dairying of the Dept. of Agriculture. The bacteria was 340 per 0.0. at ten days of age. The De Laval was used in this operation. This should prove without a doubt that clean milk can be made with your milker.

Yours very truly,

HIGHLAND GUERNEY DAIRY,

By Roy C. Kinsey,

Owner.

RCK/L



Milk Producer

ISSUED MONTHLY IN THE INTEREST OF THE DAIRY FARMER BY THE INTER-STATE MILK PRODUCERS' ASSOCIATION

Volume VIII

West Chester, Pa., and Philadelphia, Pa., April, 1928

No. 12

Should Minerals be Added to Dairy Rations

F. B. MORRISON

Director of Agricultural Extension Service, New York

During the past few years the mineral requirements of livestock have attracted much attention on the part of farmers. This has been due to the various striking discoveries made by scientists with reference to mineral needs of animals and in particular to the wide-spread propaganda by various commercial concerns offering mineral mixtures and mineral supplements for sale. Some of the claims made regarding the importance of minerals in stock feeding are entirely well founded. On the other hand many entirely unwarranted statements are seen, even at the present time.

It is therefore highly important that stockmen understand clearly just how much is known concerning the mineral requirements of their livestock. They can then supply any needed mineral supplements at low expense without expending unnecessarily large sums on expensive preparations.

Importance of Mineral Matter

Without any question whatsoever, mineral matter is of the highest importance to animals. This is shown by feeding experimental animals, rations freed as far

as possible from all mineral substances, in which case such animals will die of mineral starvation. Indeed, animals thus fed generally perish sooner than when no food whatsoever is given.

It is believed that in some mysterious way, possibly by carrying electric charges which stimulate the body cells, mineral compounds of the body direct its various vital processes. Furthermore, not only is a sufficient supply of the various mineral salts necessary, but also there must be a proper relationship in the blood between the various mineral compounds. Consequently, in a large measure the kidneys protect the animal against an unbalanced mineral matter content in the blood by promptly excreting any excess of various salts which may be present.

It is only when food continually furnishes the blood an unbalanced salt mixture that the kidneys may be unable to keep the blood composition normal with resultant injury to the animal. For instance, magnesium and calcium seem antagonistic in their action, and in getting rid of excessive magnesium the body loses calcium. When fed in excessive

amounts for a long period, feeds which contain a high content of magnesium in proportion to calcium, such as wheat bran and middlings, are said to cause a weakening of the bones, leading to such troubles as "bran disease" or "Miller's horse rickets." This, of course, does not mean that bran or middlings are not among our most valuable and healthful feeds when properly fed in combination as a part of a suitable ration.



The common feeding stuffs contain all the necessary mineral salts, at least in small amounts. As a rule, the roughages, except some of the straws, are much richer than the grains in mineral matter. Moreover, the body is probably able to use many of the mineral compounds over and over, taking them back into the circulation after having been once used. Therefore, most full-grown animals which eat a considerable amount of good-quality roughage usually secure quite a liberal supply of mineral matter, with the exception of common salt. Animals which do not have the capacity of consuming much roughage, such as swine and poultry, show a greater lack of minerals than do cattle, sheep, or horses. Also, dairy cows are more apt to suffer from a lack of mineral matter than are beef cattle, due to the fact that milk is especially rich in both calcium and phosphorus.

Salt Should Be Supplied

The experiments carried on many years ago by Babcock and his associates at the Wisconsin Experiment Station were the first to show conclusively that

(Continued on page 2)

Feeding Dairy Cows in Summer

J. R. DAWSON

Bureau of Dairy Industry, Washington, D. C.

During the spring and summer every one enjoys green foods. They are palatable, sharpen the appetite, and serve as tonics to the digestive system. Cows also like green food in the spring, and it is difficult to keep them contented until they are turned on pasture. In their wild state, green grass was their only food during the spring and summer, and they grew sleek and fat. But the food requirement of those early cows

to get sufficient nutrients out of the good pasture grass which she can eat to keep up this amount of production. Yet thousands of farmers expect their dairy cows to produce more than this during the summer on poor pastures with no additional feed.

Early spring grass is watery and immature and may contain less than 10 pounds of dry matter per 100 pounds of grass. This is a smaller quantity of

dry matter than is contained in a hundred pounds of milk. A cow producing 35 pounds of milk per day must gather and eat about 275 to 300 pounds of early spring grass to get enough feed for her requirements. It would be practically impossible for her to do this on the very best of pasture.

For this reason cows should not be turned on pasture too early. Keep them in the barnyard until the grass is 3 to 4 inches high. Then turn them on the pasture for a few hours a day at first and continue the feeding of grain, hay, and silage for a time. A gradual change of this kind will lessen the danger of bloat and will minimize the grassy taste in the milk. If cows that are producing moderately

are in thin condition at the end of winter, they may increase in weight on pasture alone. However, it is generally good practice to continue feeding grain to cows on early spring pasture because the milk production will be higher and will be maintained longer, and the cows will not lose so much weight as when they get nothing but pasture.

High-producing Cows Need Grain

When the grass has become more mature and has lost part of its succulence, it will contain from 20 to 25 pounds of dry matter per 100 pounds—about twice the amount of dry matter that early spring grass contains. However, even with this increase in the feeding value of the pasture, liberal-milking cows will need additional feed. A cow giving 35 pounds of milk daily must eat and digest about 150 pounds of this mature grass to get enough feed for her requirements. On first-class pasture a cow might do this, but very few pastures are first-class. Therefore, cows producing abundantly should always be fed grain in addition to pasture. Experi-

(Continued on page 11)

SHOULD MINERALS BE ADDED TO DAIRY RATIONS

F. B. MORRISON

(Continued from page 1)

cattle normally need an additional supply of common salt beyond the amount normally contained in the various feeds they eat. In these experiments, when cattle were maintained on their usual ration, except that no salt was added, after several months injurious effects on their health were readily apparent. They were saved from disaster by supplying salt. More recently, various other scientists have shown the need for salt for other classes of livestock. For example, Evvard, at the Iowa Experiment Station, has clearly demonstrated the necessity of salt in swine rations.

In feeding dairy cattle, it is a wise plan to add one per cent of salt to the concentrate mixture and then supply salt in addition where the cows can have access to it. By this means, the various animals are allowed to take what salt they wish. Adding a small amount of salt to the concentrate mixture increases its palatability.

Calcium and Phosphorus May Be Lacking

Since over 90 per cent of the mineral matter of the skeleton consists of calcium, lime and phosphorus, these mineral nutrients may fall short in some rations, especially in those for dairy cows, which are using a large amount of calcium and phosphorus in making milk, and also for young, growing animals which need an abundance for developing their skeletons.

It is therefore important to bear in mind the relative content of our common feeding stuffs in these two mineral nutrients.

The cereals are all very low in lime, corn containing only 0.4 pounds of lime per ton. The other cereals contain somewhat more lime than does corn, but the content is still very low. Wheat bran is rich in phosphorus, but is very poor in lime, containing only 1.8 pounds per ton. Even such protein-rich foods as linseed meal and cottonseed meal, are only fair in lime content, containing 10.2 and 7.2 pounds of lime per ton respectively. On the other hand, legume hay is rich in lime, alfalfa hay containing 39.0 pounds of lime per ton and soybean and red clover hay nearly as much. If reduced to a dry basis, skim milk contains about the same amount of lime as does legume hay.

While the cereals are all low in lime, they are fair in phosphorus content. For example, while corn supplies only 0.4 pounds of lime per ton, it contains 18.8 pounds of phosphoric acid. Wheat and oats are even slightly higher in phosphorus than is corn. Most of the protein-rich feeds are high in phosphorus content. For example, wheat bran supplies 59.0 pounds of phosphoric acid per ton, standard middlings, 42.2 pounds, and red dog flour 40.0 pounds. Cottonseed meal furnishes 53.4 pounds, linseed meal, 84.0 pounds, and soybeans 27.4 pounds phosphoric acid per ton.

Gluten feed and gluten meal, though high in protein, are relatively low in phosphorus. Gluten feed supplies only 13.4 pounds phosphoric acid per ton.

The legume hays, which are so high in lime content are only fair in phosphorus content, ranging slightly below the cereal grains in this mineral nutrient.

For example, alfalfa hay furnishes only 10.8 pounds phosphoric acid per ton.

Calcium and Phosphorus Supplements

The next logical question is "How should calcium and phosphorus be supplied when they are lacking in a ration?"

The best means of furnishing calcium or lime is to provide an abundance of legume hay, in the case of animals which can consume a considerable amount of roughage. This statement obviously excludes swine and poultry, but certainly includes dairy cows.

Well-cured legume hay not only furnishes a large amount of lime, but also supplies some of the vitamin D which is necessary to enable animals to assimilate and use the lime and phosphorus in their food.

Mineral supplements furnishing lime are ground limestone, marl, and even wood ashes. Limestone high in calcium and low in magnesium is to be preferred to a high magnesian or dolomitic limestone. However, investigations by Hart at the Wisconsin Experiment Station, have shown that for cattle and swine even a dolomitic limestone will produce good results, providing the magnesium content is lower than the calcium content. Obviously, the actual value of a ground limestone as a mineral supplement would depend upon its calcium content, a high calcium limestone being worth correspondingly more, ton for ton, than a low calcium limestone. In experiments with poultry by Hart and Halpin, at Wisconsin, dolomitic limestone has not given as good results in poultry feeding as the high calcium limestone.

Since ground limestone may be used as a mineral supplement to furnish additional calcium or lime, it is obvious that one need not go to much expense to provide such a supplement. On the other hand, a phosphorus supplement is considerably more expensive than a calcium supplement.

Most commonly, some bone meal is used when it is desired to add phosphorus to a ration. The best form of bone is one which is prepared exclusively for feeding purposes, as fertilizer bone meal commonly has a vile odor and may contain injurious substances produced in the decomposition which has taken place in such fertilizer bones. Bone black, a by-product of the sugar refinery, is also a very satisfactory phosphorus supplement, containing slightly less phosphorus than does steamed bone meal.

Ground rock phosphate has been often recommended for use as a mineral supplement. In certain experiments, this has produced satisfactory results, but in others the ground rock phosphate has proved injurious to live stock. This injury is apparently caused by the relatively high fluorine content of ground rock phosphate, which ranges from 1.5 to 3 per cent.

In view of the injury which may result from ground rock phosphate feeding, its use for a mineral supplement for livestock is not advised.

Acid phosphate, or super-phosphate, such as is used for fertilizer, has given good results in feeding trials with swine, carried on especially by the Indiana Experiment Station.

Recently there has come on the mar-

ket a mineral supplement, sold under the trade name of "Fos-For-Us". This is a phosphorized limestone, occurring along with ground rock phosphate in certain phosphate fields. "Fos-For-Us" contains much less fluorine per hundred pounds than does ground rock phosphate, carrying only about 0.6 per cent. However, the content of phosphorus is also much lower than is the case in ground rock phosphate. By computation it will be found that "Fos-For-Us" contains just about as much fluorine to each pound of phosphorus as does ground rock phosphate.

This product has apparently given good results in several instances in poultry feeding. However, before it would seem wise to recommend it for general use as a mineral supplement in livestock feeding, it would be desirable to have available the results of extensive investigations to determine whether or not any injurious results may be produced by the content of fluorine.

Mineral Requirements for Milk Production

It has long been known that milk is rich in mineral matter, especially in calcium and phosphorus. However, up to a few years ago it was assumed that when dairy cows were fed common, well-balanced rations containing plenty of protein and a liberal amount of legume hay there could be no deficiency in either calcium or phosphorus for legume hay is rich in calcium, and protein-rich feeds are in general high in phosphorus.

Surprising results were, however, secured in extensive experiments at the Ohio Experiment Station by Doctor Forbes. In these trials high-producing cows have been fed such excellent winter rations as alfalfa or clover hay and corn silage for roughage, along with corn and such high protein concentrates in addition as wheat bran, cottonseed meal, linseed meal, dried distillers' grain, or gluten feed.

On these rations, which have always been considered ideal for dairy cows, in most instances the animals lost calcium, phosphorus, and also magnesium from their bodies, in spite of the fact that the feed they were given supplied what would appear to be ample amounts. For some reason or other, the cows were unable to assimilate and retain enough of the liberal supply of these mineral nutrients in their feed to meet the heavy requirements in producing the large amount of milk they yielded.

Even when abundant amounts of calcium, or both calcium and phosphorus, were added to their ration in such forms as steamed bone meal, calcium carbonate, or calcium lactate (a soluble form of calcium), the losses of these mineral constituents from the body continued. The reason for this little-expected condition is still a problem. Possibly the milk producing capacity of our dairy cows has been so increased by selective breeding that it exceeds the ability of high-yielding cows to assimilate sufficient mineral nutrients from their feed to meet the heavy demand in producing the large flow of milk during the first part of the lactation period. Later on in lactation, or when they are dry, they are able to build up again the stores of

these mineral constituents in their bodies.

In extensive experiments at the Wisconsin Experiment Station by Professor Hart and his colleagues, it has been found that dairy cows are able to assimilate calcium much more completely from fresh green feed than from dried forage, such as hay. Furthermore, well-cured alfalfa hay is superior to that improperly cured. These trials indicate that the best way of curing hay is to cure it in the bright sun, getting it into the barn as soon as it is dry enough, by means of using the side delivery rake, hay loader, etc. Hay cured by such a method will contain the maximum amounts of vitamins.

All this work on the mineral requirements of dairy cattle is so recent that we do not yet know how far-reaching the results may be in practical feeding. These various trials, however, emphasize the importance of pasture and other green forage for dairy cows during the growing season, and of furnishing an abundance of legume hay during the rest of the year. Also, the cows should be dried off six to eight weeks before freshening, and during this time should be so fed that they will be in good condition at calving. This rest period will give them an opportunity to rebuild the store of calcium and phosphorus in their bodies, which may have been depleted by the drain of milk production.

Practical Pointers on Minerals for Dairy Cows

On account of the great importance of supplying cows plenty of minerals, it may be well to summarize very briefly and definitely the recommendations with reference to this matter:

In the usual dairy ration there is more danger of a lack of calcium than there is in phosphorus. This is because most of the common protein-rich feeds are also rich in phosphorus. This includes wheat bran in particular and also wheat middlings, cottonseed meal, and linseed meal. Gluten feed, germ oil meal (corn germ meal), brewers' grains and distillers' grains are not especially high in phosphorus.

When 20 per cent or more of the concentrate mixture or grain mixture consists of wheat bran, wheat middlings, linseed meal, or cottonseed meal, the cows will get plenty of phosphorus. If less of these high-phosphorus feeds is fed, it is best to supply additional phosphorus by adding bone meal, as stated later.

A large production of milk and thrifty calves are an impossibility if there is a lack of calcium in the ration. The best way of furnishing plenty of lime is to grow and feed an abundance of alfalfa, clover, or soybean hay whenever it is possible. All legume hays are rich in lime. Furthermore, well-cured, green colored hay, cured in the sun, contains the vitamin which animals need to enable them to assimilate and use the calcium in their feed.

If poor roughage must be used, such as hay from the grasses (not legumes) corn stover grown on acid soil, or straw, add 3 to 4 pounds of ground limestone, wood ashes, or dried marl to each 100 pounds of concentrate or grain mixture.

(Continued on page 10)

Inter-State Milk Producers' Association Directors Hold Meeting

The regular bi-monthly meeting of the Board of Directors of the Inter-State Milk Producers' Association, was held at the organizations new offices in the Flint Building, 219 North Broad Street, Philadelphia, Pa., on March 12 and 13, 1928.

Those attending the meeting included, H. D. Allebach, president; Frederick Shangle, vice president; Robert F. Brinton, treasurer; Robert W. Balderston, secretary; and the following directors: S. K. Andrews, J. H. Bennett, Ira J. Book, E. H. Donovan, E. Nelson James, W. Keith, H. I. Lauver, S. Blaine Lehman, A. R. Marvel, I. V. Otto, E. R. Pennington, J. A. Poorbaugh, C. F. Preston, Albert Sarig, C. C. Tullman, R. I. Tussey, Harry B. Stewart, S. U. Troutman, F. M. Twining, F. P. Willits and A. B. Waddington.

The minutes of the previous directors meeting and those of the various meetings of the Executive Committee of the association were read and approved as was also the monthly report of the treasurer.

The various expenditures since the last meeting of the Board were presented by the secretary and were approved.

Robert F. Brinton, treasurer presented a budget system of expenditures for the various departmental branches during the current year, which was approved by the Board.

The tentative date of the annual meeting of the association was, after discussion, set for Thursday and Friday, November 22 and 23, 1928.

J. W. Jones, of the United States Department of Agriculture Division of Co-operative Marketing, presented a detailed observation of a recent survey made last fall on "Membership Problems of Four Large Co-operatives" (This article was presented in the September 1927 issue of the Milk Producers Review). Mr. Jones in his address analyzed in detail the exact conditions that he found in making this survey in the Philadelphia Milk Shed, and presented for the benefit of the Directors, the various problems as he had found them.

This address was followed by a general discussion which developed some interesting phases in connection with the associations work in the field, particularly in the further development of the associations Local Units. A committee appointed to further consider this question was named by the President. This committee includes, F. P. Willits, chairman; Frederick Shangle, E. H. Donovan, C. F. Preston and R. W. Balderston.

Tuesdays Session

Detailed reports of the directors were presented as to conditions in their respective territories. In a large majority of cases conditions were generally satisfactory. Reports as to losses by the tubercular test varied in some sections from 3 per cent up to 25 per cent on an average.

Plentiful supplies of milk were pretty generally reported, notwithstanding the fact that the public quantities were lower, in some sections, than they were a year ago.

Prof. H. M. Reist, of Pennsylvania State College, made a short address on "Marketing Conditions, Present and Future."

Frank M. Twining, in charge of the

Field and Test Department, made a report of the work of that department as well as the general membership program.

C. I. Collee, of the Dairy Council Department of Quality Control, briefly outlined the new form of Permanent and Temporary Permits which have recently been adopted and which will become effective on June 1, 1928.

Review of Market Conditions

H. D. Allebach, president of the Association, presented at length the underlying conditions of the fluid milk market in this territory. "Production," he said, "had increased sharply. In many cases producers were making a larger supply. While last year the actual production, at this season was well below the average basic quantity, this season it has very materially increased. Disturbed labor conditions have had an unfavorable bearing on consumption. There has been a material surplus above consumption and this has been largely due to the increase in supply of 'basic' milk."

"The condition on the whole has been somewhat critical, but by a careful handling of the situation," said Mr. Allebach, "I believe the market will remain unchanged—at least for the present."

"Producers should take heed and not over burden the market at this time."

Test 21,420 Cows

In Keystone Herds Sixty-one Pennsylvania associations tested 21,420 cows during February, the Pennsylvania State College Dairy Extension Service announces. The West Chester association in Chester County led with 563 cows tested. Warren association members tested 540 milkers. To the butchers went 190 "border" cows, found wanting in the test.

Forty-pound butterfat producers numbered 2,812, Wellsboro, Tioga County, leading with 119 and Allegheny in second place with 99. Thousand-pound milkers totaled 3,678. Wellsboro dairymen also led in this division with 150 of the heavy milkers. The West Chester group was next with 131.

Of the 40-pound fat producers, 952 passed the 50-pound mark, and 1,967 of the 1000-pound cows gave more than 1200 pounds of milk.

The three best milkers were registered Holsteins owned by Bell Farm, Allegheny association; Norman White, Le-Raysville in Bradford county, and Roy Bowden, Wellsboro. Their records were 3,065, 2,880, and 2,784 pounds respectively.

Leading cows in butterfat production were a registered Holstein owned by William Bohlmer, Canton association, Bradford county, with a record of 111 pounds; a registered Jersey in the herd of J. H. Silvis and Sons, Westmoreland No. 3, 109.2 pounds, and a registered Holstein in the same herd, 106.6 pounds.

Associations having the highest 10-cow averages in butter production were Wellsboro, 76.4; Allegheny, 74; and Bedford, 68.4 pounds.

Test Seed Before Planting

Make a germination test of all seed before using it, and then plant only that which is good. Successful farmers do not plant poor seed.

Vitamin A is needed to make children grow and it also helps to build up the general resistance of the body to disease.

Farmers' Marketing Institute Holds Session on Eastern Shore

Hundreds of farmers attended a two days Marketing Institute held at Centerville, Maryland, March 13th and 14th, 1928, under the joint auspices of the Maryland State Extension Service, the Inter-State Milk Producers' Association and the Queen Anne County Farm Bureau.

This meeting was the first of this character that has been held in this section and it featured practically every phase of production common to that district.

"Marketing Quality Products," by Dr. F. B. Bomberger, Extension Director, Del-Mar-Va Eastern Shore Association; "Improving Lambs and Sheep," K. A. Clark, Live Stock Specialist, Maryland Agricultural Bureau. "Trade Demand for calves and Hogs," by Stocton Startt, Live Stock Dealer and Farmer, Chestertown, Md. and "Stockyards" by B. B. Derrick, Bureau of Agriculture Economics U. S. Department of Agriculture—made interesting addresses at the first morning session.

The second session of the first days meeting was devoted largely to the poultry industry with the following addresses.

"Importance of Poultry and Eggs," W. H. Rice, Poultry Specialists, Maryland Extension Service; "Cooperative Turkey Marketing," Wm. G. Smyth, Secretary Kent County Farm Bureau; "Producing and Selling Turkeys," Mrs. H. M. Baker, Kent County, Md. "The Why and How of Premium Eggs," by Neal Truslow, Chestertown, Md.; "Early Broilers in Caroline County," Thos. D. Holder, Agricultural Agent, Caroline County, Md.; "The School of Community Improvement," by T. G. Bennett, Superintendent of County Schools.

Dairying Session

The morning session on Wednesday, was largely to dairying. C. I. Collee of the Philadelphia Inter-State Dairy Council, was in charge of the session.

O. C. Jones, Centerville, Md., made an interesting address on "The Possibilities in Heifers." The necessity of maintaining the proper growth of heifers is an important one. Roughly there is a 16 per cent loss in the volume of the dairy herds each year, which deficiency must be supplied either by growing or by buying heifers. If the heifers are grown on the farm the biggest single factor is the herd sire.

He should be from known production sires and dams and should have the quality of transmitting his good qualities to his offspring. Breeding records are necessary to insure this. The dairy industry is world wide in scope and producers must meet this competition.

Frank Elsey, Field Representative of Harbison's Dairies, Philadelphia, Pa. spoke on "What the Trade Demands." The distributor has to meet the demands of the public as well as the demands of the Board of Health in the market in which he is distributing milk. Competition is another factor of vital importance. While city regulations may require but a 3.25 per cent butter fat content of fluid milk, but competitive business has raised the standard up to 3.8 per cent, and this quality must be uniform—day after day. Not only is the fat content a factor, but flavor has an important bearing.

Garlic, or milk with any off flavor is unsaleable. What the public demands is a safe milk, clean—that is free of sediment, of low temperature that will

retard bacterial growth and one that is free of any off odors and flavors.

C. I. Collee, Director of the Quality Control Department of the Philadelphia Inter-State Dairy Council, Philadelphia made an address on "Marketing Quality Milk." Mr. Collee said in part, "I am frequently asked, 'What is Quality Milk?' It is the kind of milk that you can sell and for which the demand will increase. What are Quality Factors?—Location, climate conditions, cool water conditions, plant operation and the individual man power have important bearings on successful dairying. The dairyman must operate his dairy on a business basis in order to be successful. Small business operations may be successful but volume measures the degree of success."

Mr. Collee illustrated his talk by means of charts showing the volume of production in various sections of the Philadelphia territory. By these he showed how the Eastern Shore of Maryland compared in production with other, more profitable sections. Cows of the "Border" type are unprofitable. At some points in this district 15 cows are required to produce as much milk as is produced by 10 cows in some more profitable section. In other words producers with the smaller number of cows are producing milk at one-third less cost of care, operation, feeding, etc. than are those in this territory.

It is not increased production that is required, but efficient production. The same quantity of milk produced at a lower cost means more profit for the producer. Increased production would be dangerous, but the same volume of production from a smaller number of cows mean more profit for the producer.

C. E. Wise, Portland Cement Association, made an address on the use of concrete in the production of Quality Milk, and Miss Betty Amos, of the Nutrition Department of the Philadelphia Inter-State Dairy Council, made an interesting talk on "Better Nutrition."

Dr. E. B. Simonds, Inspector in Charge of the Tuberculosis Eradication in the State of Maryland in a brief address said, "That about one half of the county of Queen Anne had been tested for tuberculosis in cattle. He contended that 'Farmers should stop thinking about losses, base it on number of cattle reacting. Think of it in gallons of milk. A smaller number of better and healthy cows will produce just as much milk. Don't raise poor cattle, select the heifers that will be real producers. Watch your bulls, grade bulls as a rule are only worth their beef value. Use greater care in your clean up program, and don't replace tubercular cattle until the clean up work is done. When replacing herds, buy your cattle from safe sources and when you do replace do so on the basis of production to meet the volume of milk lost."

Wednesday Afternoon Session

This session was devoted to growing of vegetables for canning purposes and was extremely interesting. Addresses were made by L. M. Godwin, Canning Crop Specialist, Maryland Extension Service, on "Improvement in the Raw Product;" "Outlook for Canning Crops," by A. D. Rodebaugh, representing the American Can Co., "The Canners Problems," by a representative of the Tri-State Packers Association and "Producing Early Potatoes," by C. Z. Keller, Agricultural Agent, Somerset County, Maryland.



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All this means easier, quicker milking. It means, too, a longer lactation period and more milk for you.

Your local Empire dealer will be glad to demonstrate an Empire. You can see for yourself how the Empire will simplify your milking, how you can operate an Empire yourself without constantly calling for SERVICE. A liberal credit plan makes buying easy.

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Empire is Superior to Other Milkers, Because

The EMPIRE Milks As It Should. The Empire takes milk from all four quarters at once—just as the cow gives it down. This means quicker milking, with less strain on the cow; a longer lactation period and more milk. The Empire's three-sided tip-to-udder squeeze (a patented feature) exactly duplicates the massage of a calf's tongue.

The EMPIRE Is Easy To Operate. Cows can be quickly placed on teats. Held firmly by vacuum, they do not climb up or drop off. No harnessing to waste the operator's time.

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The EMPIRE Lasts Longer. Some Empires are still in service after twenty-six years. Patented reinforced Empire inflations prevent stretching—a feature exclusive to Empire. That is why Empire inflations stand repeated handling and boiling and last five times as long as ordinary inflations.

Live Stock Statistics in Pennsylvania

All classes of livestock on farms in Pennsylvania, except horses and mules, show recovery from the downward trend in numbers, which has been in progress for some time, according to figures reported by the Federal-State Crop Reporting Service. The increase in numbers, together with an advance in price, in all classes except swine, results in a total valuation of \$173,022,000 on January 1st, 1928, an increase of \$29,206,000 over the corresponding figures of one year ago.

Estimates for the United States indicate increased numbers of hog and sheep and decreased numbers of cattle, horses and mules. If differences in sizes and feed requirements of the several species are considered, the quantity of livestock in the United States remains approximately the same on January 1st, 1928, as it did one year ago.

The valuation of all livestock, \$5,596,922,000 is the highest since 1920, and \$518,504,000 or 10.2 per cent in excess of the January 1st, 1927 value.

The following table gives revised data as of January 1st, 1928, in the number and value of live stock on farms in Pennsylvania, in 1926, 1927 and 1928 and the five year average 1923-1927.

	Year	No.	Value
Horses and Cattle	1926	890,000	\$103.00
	1927	874,000	99.00
	1928	874,000	101.89
	Average 1923-27	874,000	112.00
Mules and Mule Cattle	1926	53,000	113.00
	1927	52,000	110.00
	1928	53,000	118.61
	Average 1923-27	53,000	121.00
All Cattle and Calves	1926	1,298,000	60.60
	1927	1,289,000	64.70
	1928	1,348,000	55.01
	Average 1923-27	1,332,000	81.90
Cows and Halfers	1926	862,000	75.00
	1927	845,000	80.00
	1928	883,800	87.16
	Average 1923-27	865,000	108.00
Sheep and Lambs	1926	415,000	9.70
	1927	400,000	9.40
	1928	422,000	8.52
	Average 1923-27	407,000	9.50
Swine, including pigs	1926	683,000	10.00
	1927	731,000	19.00
	1928	820,000	16.97
	Average 1923-27	841,000	16.00
Total All Livestock	1926	2,839,000	48.90
	1927	2,851,000	50.40
	1928	3,068,200	45.58
	Average 1923-27	2,820,000	57.30

Cattle on farms in Pennsylvania which have been declining since 1919, show an increase of more than 3 per cent over the estimated number January 1st, 1928. Notwithstanding the reduction in some dairy herds and the inability of farmers to restock on account of high prices, the number of cows and heifers, 2 years old and over, kept for milk, shows a net gain of 10,000 head. In some sections more heifer calves are being raised; in others, this tendency is checked by the high price of veal. Despite these obstacles the industry seems to be expanding.

The number of cattle on farms in the United States declined about 1,200,000 head during 1927 and is probably not near the low in the downward movement which began in 1919. The estimated number for January 1st, 1928, is 56,872,000, valued at \$54.12 per head, which is an advance of almost \$12.00 over the January 1st, 1927 price. Milk stock, however, shows a small increase in number of both heifers one to two years of age and cows and heifers two years old and over. The average value of the latter class, \$77.43 per head, is \$15.00 higher than the January 1st, 1927 price.

First 10 Years of Campaign Greatly Reduces Bovine TB

Ten years ago, soon after he had taken charge of the Tuberculosis Eradication Division of the United States Department of Agriculture, the late Dr. J. A. Kiernan made the significant and prophetic statement that "tuberculosis can be eradicated from all the cattle and all the swine in the United States."

At that time official testing showed that 4.9 per cent of the cattle were infected with tuberculosis, and figures on 40,000,000 hogs slaughtered under the Federal inspection indicated that 10 per cent of all the swine in the United States were infected.

At the close of 1927 the same sources of information indicated that tuberculosis in cattle had decreased to 2.9 per cent infection, and that although the disease in swine had increased from 10 per cent in 1917 to 15.2 per cent in 1924 it has gradually been decreasing since that time and at the close of 1927 was 13.5 per cent.

There are now 401 counties, or 13 per cent of the entire number in the United States, classed as modified accredited areas because they have less than one-half of 1 per cent infection in cattle. In addition to these free counties there are 627 others engaged in the work looking to modification. This total of 1,028 counties, either modified or working to that end, constitutes one-third of the total number of counties in the United States. A total of 18,610,865 head of cattle are now under supervision for the eradication of tuberculosis.

In reviewing the last 10 years' work, Dr. A. E. Wight, acting chief of the division, said that this marked decrease of infection in both cattle and swine has been accomplished as a result of the intensive campaign against the disease. It is apparent, he says, that the possibility made in 1917 relative to the possibility of controlling and eradicating this disease is being borne out. He emphasizes the necessity, however, of continued and determined effort to completely eradicate the disease as early as possible. If a feeling of security is permitted to exist to the detriment of organized efforts, dire results may yet occur in some localities.

Farm Machine Study at Penn State

An innovation in farm machinery instruction is being tried at Penn State College. Four days are being devoted to intensive work in assembling, adjusting, and operating all kinds and types of field equipment.

Tractors, threshing machines, harvesting and haying machinery, plows, and seedbed preparation tools have been contributed by manufacturers for the use of students in farm machinery courses. To take full advantage of the equipment while it is at the college the students have been excused from their other classes. Farmers from the vicinity of State College are attending the school also, and representatives of manufacturing concerns are assisting in the instruction.

On one evening a large meeting of farmers and students was addressed by A. P. Yorkes, of the International Harvester Company; H. A. Grubb, manager of the local Farmers' Cooperative Association, and Dean R. L. Watts of the School of Agriculture. Music and motion pictures completed the program.

The Members Are the Association

By L. S. HULBERT, in "Agricultural Cooperation"

The members of a cooperative association, at least in a practical and non-legal sense, are the association. The cooperative association is simply a medium or method for enabling producers to act collectively in the handling and marketing of their products or the buying of supplies. If an association is not conducted to the general association of its members, the fault lies with the membership; if this condition continues over an extended period, because of their failure to place competent men in charge. An association, broadly speaking, is the agent of its members, the members collectively are the principal, and of course it is a commonplace that an agent must act in accordance with the express desires of the principal.

Officers and Directors Accountable to Members

Members of Cooperative associations are often prone to look upon the association of which they are members as something separate and apart from them. In a strict legal sense this conception is correct, but in a practical sense it is less correct. The directors and officers of an association are placed in office by reason of the action of the members of the association. The officers and directors are simply the authorized representatives of the members for the conduct and operation of the business in which the association is engaged. These officers and directors are accountable to the members and if they fail to conduct the business along sound lines or prove to be incompetent, the members can select others to fill their place. It is true that if the officers and directors of an association adopt policies or engage in transactions that are not satisfactory to a majority of the membership, these officers and directors cannot be instantly removed from office, but over a period of time the officers and directors of an association must, if they are to continue in office, justify their conduct of the affairs of the association and demonstrate that they are competent persons to be entrusted with its management, provided that the membership is alive to its rights, duties and responsibilities.

Should Avoid Thoughtless Criticism

The cooperative statutes, generally speaking, provide for machinery by which officers and directors who prove to be incompetent or unsatisfactory may be removed from office before the expiration of their terms. Owing to the large area over which a cooperative association may operate and the large number of members which it may have, it is not always an easy task to obtain an expression of the members as to their desires concerning the business of the association or other matters connected with its affairs, but if the circumstances warrant obtaining an authoritative expression from the membership, it is possible, ordinarily, for this to be done, not only at annual but at special meetings. Officers and directors of an association should not be looked upon as targets at which to direct thoughtless criticism. Every doubt should be resolved in favor of those in charge of an association until it is clearly shown that they are incompetent.

Hard Task to Manage Large Association
It is a hard and difficult task to manage a large enterprise. Only those who are actively engaged in doing so know of the difficulties that have to be

met. To criticize thoughtlessly and without having a clear knowledge of the facts is to make the tasks of officers and directors of an association hard if not intolerable. Officers and directors, like other members of an association, will often err in their judgment so it is unwise, ordinarily, to base a decision regarding the competency of an officer or director upon a single transaction. The fact remains, however, that in theory at least the officers and directors of an association must demonstrate their competency and fitness for the positions which they hold if they are to continue in office over an extended period.

Should Have Long-Time Point of View

Frequently a considerable period of time must elapse before the results of any policy are evident and this fact should always be borne in mind in passing upon the efficiency and competency of the management of an association. Generally speaking, the members of cooperative associations should have the long-time point of view with respect to them; and should not expect miracles or instantaneous results of a decidedly high order. The greatest benefits from a cooperative association may only be expected after it has had an opportunity to establish itself thoroughly as an integral part of the business world in which it functions.

Penn State Students

To Stage Dairy Show
Contest and exhibits will feature the Sixth Annual Penn State Dairy Exposition May 6, Michael A. Farrell, Waverly senior who is president of the Penn State Dairy Science Club, declares.

Eight committees of students are working early and late to shape the program and assign animals for fitting and showing. Besides the fitting and showing contest there will be competition in clean milk production, dairy cattle judging, and dairy products judging. There also is a bacteriological contest and an essay contest, the latter being sponsored by the Portland Cement Association.

Forty-five animals were drawn by students last week and fitting will begin immediately after the Easter vacation at the college.

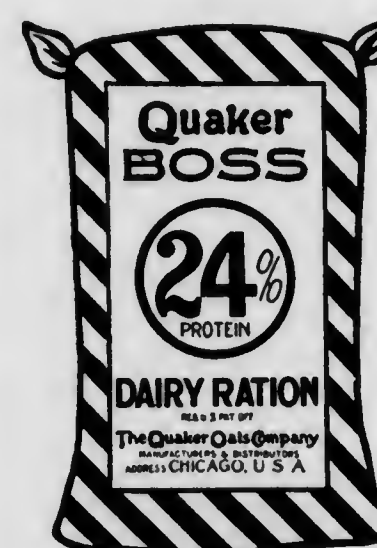
Chairmen of committees include R. B. Ace, Tunkhannock, clean milk production; M. A. Farrell, Waverly, bacteriological contest; J. D. Girard, Millville, dairy products judging and exhibit; R. R. Peters, Phillipsburg, dairy cattle fitting and showing; W. L. Phipps, State College, dairy cattle judging; M. H. Berry, Mohnton, catalog; O. W. Williams, Wilkes-Barre, senior booklet, and C. W. Dromgold, New Bloomfield, banquet.

Prizes will be awarded to winners at a big banquet following the day's events.

The Test of a Man

There is no truer test of a man's qualities for permanent success than the way he takes criticism. The little-minded man can't stand it. It prickles his egotism. He "crawfishes". He makes excuses. Then, when he finds that excuses won't take the place of results, he sulks and pouts. It never occurs to him that he might profit from the experience.—Thomas A. Edison.

It Helps Your Cows Do Their Best



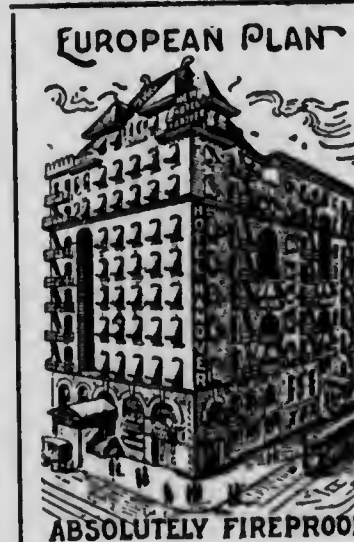
Essential minerals in just the right form and proportion—and molasses in dry form—are contained in this feed. Send for your free copy of The Dairy Herd.

When you use Quaker Boss Dairy Ration you give your herd a chance to do its best. Every cow requires certain essential foods to make maximum milk; in Quaker Boss she gets these things in the very best form. No risk, no guesswork, no time- and profit-wasting labor for you. Just use Quaker Boss as your grain ration and make your own roughage do better work. See the Quaker Dealer in your vicinity.

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Burning over pastures and meadows to get rid of weeds and old trash does not pay, it injures the grass roots and removes desirable humus.

Paint makes buildings last longer and give better service. Attractiveness of the farmstead also is enhanced by well-painted buildings.



Health Lessons

From the Flood

The Mississippi flood of 1927, with all its loss and disaster points out some very difficult community health lessons not emphasized in regular daily life. With people hastily gathered into refugee camps, with the pollution of the flood making drinking water unsafe and flies and mosquitoes bringing malaria, it took very careful supervision and strict regulations to prevent outbreaks of small pox, typhoid and other communicable diseases.

The doctors and nurses under the direction of the Red Cross, immunized more than half a million individuals against typhoid fever, and about 200,000 against small pox. More than 200,000 gallons of oil were used for mosquito control. Large quantities of quinine sulphate, estimated at 2 tons, were used for the prevention of malaria.

Then an extensive screening program was undertaken, more than 27,000 screen doors were constructed and installed, and more than 25,000 windows were screened. Dr. De Kleine reports that "it was intended that all homes of malaria carriers should be carefully screened. This was done wherever possible, although the work was not entirely confined to that. Many houses were screened in localities where they would serve as valuable object lessons. This screening program had perhaps even greater value as an educational measure than as a means for the immediate control of malaria."

And what was the result of all this care and prevention? The State Health Commission of Louisiana records, from January 1 to August 26, 1927, were 142 deaths from typhoid as compared with an average of 463 for the same period for the last 5 years. Similarly 198 cases of small pox as compared with an average of 713 for the same period in the last 5 years.

This shows that with care and supervision these diseases can be controlled and lessened.

Space is too small to go into many other instances to prove this same point. This lesson is very clear that a properly organized and manned health organization should be established in every county, on such lines as will be practical to mobilize these units and focus all the health agencies of the country on the particular problem which demands solution.

"Do they want to wait until they have a fire to get a fire department?" asks Dr. McCormack of Kentucky—"or wait until they have a murder to organize a police department? Such a health department is just as essential to the future happiness and welfare of this country of ours as are our courts, our legislative bodies and any other portions of our civil government. That to my mind is the great lesson, the end—result to be drawn from this experience."

Aunt Ada's axioms: When you talk about the good old days, remember the present time is going to be "the good old days" of the future.

A Canning Budget for Five

Plans insuring an adequate supply and pleasing variety of fruit and vegetable foods for the winter months have been worked out by women in many States who have acted on the advice of home demonstration agents. These take the form of canning budgets which often include meats and poultry products and fruit and vegetables required during the winter months for well-balanced meals. By following such a budget a housewife has the satisfaction of a wisely stocked pantry, and she saves time, energy, and money. The budget used provides fruit

and vegetables for a family of five for six months. Under this plan the housewife would can 72 quarts of tomatoes to be used three times a week; 12 quarts of carrots, 24 of beets, 48 of string beans, 24 of okra, and 24 each of sauerkraut, corn, English peas, and soup mixture. The fruit would be divided into 72 quarts each of peaches and blackberries, 48 of apples, 24 each of plums, pears, and fruit juices, and 12 quarts of huckleberries. An allowance of 1 pint of preserves and two glasses of jelly per week complete the canning budget.



"Yes, We Have Health Foods in Our Store Every Day"

If children know the best foods to buy, it is likely that they will also remember the relative merits of eating these same foods.

The Hancock School, Norristown, Pennsylvania, has demonstrated the value of the novel idea of teaching children the importance of fresh fruit, green vegetables and milk through the buying and selling of a play-store.

This Health Food Store project was recently developed by the Philadelphia Inter-State Dairy Council and first used by the Hancock School. It is distinctive in that the problems worked out by the children are centered around the relation of foods to health.

The illustration shows the miniature store set up and operated by children of the second grade. It is equipped with empty trade cartons, milk bottles of various sizes, and imitation fruit and vegetables.

The positions of store-keeper and customers rotate among the members of the classes. The assignments made by the teacher also vary from day to day and include the practical application of many subjects of school-room instruction such

as multiplication, subtraction, and division, geography, sight reading, use of U. S. coinage system, weights and measures.

The Health Food Store is plentifully supplied with milk, butter, cottage cheese and other dairy products. It carries a full line of vegetables and fruits. But no tea and no coffee.

The children become interested through the project in the processes of milk transportation and distribution. In the foreign countries producing sugar and cocoa. Such interests bring geography close to their every-day life.

Likewise, the purchase of soap leads to the lesson of cleanliness; clean bodies, clothes, and homes. How does a sanitary home or store care for its milk, fruit, cheese and eggs?

From the store itself, many other activities are developed. Use of the foods purchased at this neighborhood play store, to plan a good breakfast or dinner. A play restaurant where courtesy is emphasized, a play hospital to show the need of caring for eyes and teeth or correcting habits of posture.

A complete outline of the Health Food Store project, with directions for constructing, equipping and operating it may be secured from the Philadelphia Inter-State Dairy Council.

Spring Trimmings For the "Wornout" Recipe

If you were to go to the milliner for a hat and she were to offer you a plain bare straw or felt, then make no effort to demonstrate how the hat could be trimmed, you would very likely walk out of the store, righteously indignant because of the poor salesmanship for the shop keeper. Hats, without trimmings, are just as good a protection for the head, but hats—whether they are for utility or just adornment, are always trimmed. Some very elaborately and others with just a plain band of ribbon or a tiny pin. Somehow it is never too much trouble to trim a hat and those who insist on trimmings are never accused of being "high brow". This, however, is not true of all forms of decoration.

The real topic of this little talk should be—"Garnishing", because we apply that term to the trimmings for food. The busy housewife is too prone to feel that garnishes for food entail a tremendous amount of extra work, and can only be used on festive occasions. But if the housewife thinks how she may trim the food which she wishes her family to eat, she may consider herself a better saleswoman than the milliner who offers the untrimmied hat.

Perhaps Johnny doesn't like oatmeal. Well, did you ever try dressing it with raisins? Surely that is no trouble and it may increase its sale greatly. Perhaps the reason why the patrons at your dining table do not eat lettuce is that you never think to pick it a little early and put it on the ice so that it will crisp up nicely. There is as much difference between a flat piece of lettuce and a nice, cold, crisp, curling one as there is between a drooping, rain soaked hat and a perky French model. Even the much abused spinach becomes very desirable when stacked in the center of a platter, topped with a few slices of hard cooked egg and surrounded by some bright colored vegetable such as carrots or beets. When you are serving two such foods why not make one enhance the other by serving them together?

You really save yourself work because you save dishes. Meat and vegetables may often be arranged on one large platter with less trouble than it would take to serve them in separate dishes. Such a platter, placed at the head of the table, may be as great an adornment as the picture hat of a bridesmaid in a wedding procession. Pure ice cream has such a general appeal that it really needs no trimmings, but during the summer when luscious fresh fruits are so handy a few slices of peach or pineapple, or a spoonful of berries lend a refreshing charm to the ice cream such as a small French flower may add when placed artistically on a beautifully designed hat.

And so it is not extra work, but a little ingenuity that is needed by the housewife to put the trimmings on food so that those who eat it, eat it not only because they must, but because they really want to!

Put the children on the pay-roll with rewards for good work well done.

Advisory Board of the Dairy Council Holds Annual Meeting

The Advisory Board of the Philadelphia Inter-State Dairy Council held its Annual Meeting on March 12th, to review activities of the organization during the past year. The program included a display of educational material in the new offices, buffet supper served by the Nutrition Department, and a panorama from thirteen Dairy Council plays and talks. Reports were presented by the Executive Secretary and Departmental Directors. An address, "Our Health Education Project" was given by Miss Rhea Baker, of the Girls Southern High School, Philadelphia.

A number of new names have been added to the membership of the Board, which is now composed of twenty authorities who are individually distinguished in their various fields of health and education.

Miss Julia Wade Abbot—Director of Kindergarten Education, Philadelphia Public Schools.
Dr. Edwin W. Adams—Principal, Philadelphia Normal School.
Dr. Theodore B. Appel—Secretary of Health, Pennsylvania.

Dr. Emily Bacon—Chief of Department of Pediatrics, Women's Medical College.

Miss Madge T. Bogart—Director of Home Economics Extension Service, Pennsylvania State College.

Mrs. Henrietta W. Calvin—Director of Home Economics, Philadelphia Schools.

Dr. Oliver P. Corman—Associate Superintendent of Public Instruction, Philadelphia.

Dr. A. T. Gerson—Associate Superintendent of Public Instruction, Philadelphia.

Ralph D. Hetzel—President of Penn State College.

Miss E. Louise Johnson—Supervisor of Nurse Service, Philadelphia.

Dr. Clyde L. King—Wharton School, University of Pennsylvania.

Dr. Wilmer Krusen—President of Philadelphia College of Pharmacy.

Mrs. Wm. E. Lingelbach—Member of Board of Public Education, Philadelphia.

Mrs. S. Blair Luckie—Member of Board of Education, Chester, Pa., Ex-President of Federation of Women's Clubs.

Dr. E. V. McCollum—School of Hygiene and Public Health, Johns Hopkins University.

Miss Anna B. Pratt—Director of White Williams Foundation.

Dr. Carlson Ryan—Professor of Education, Swarthmore College.

Mrs. George Wertsner—Vice-President, Home and School League.

Dr. Joseph Willits—Wharton School, University of Pennsylvania.

Dr. Lucy Wilson—Principal, Girls High School, Philadelphia.

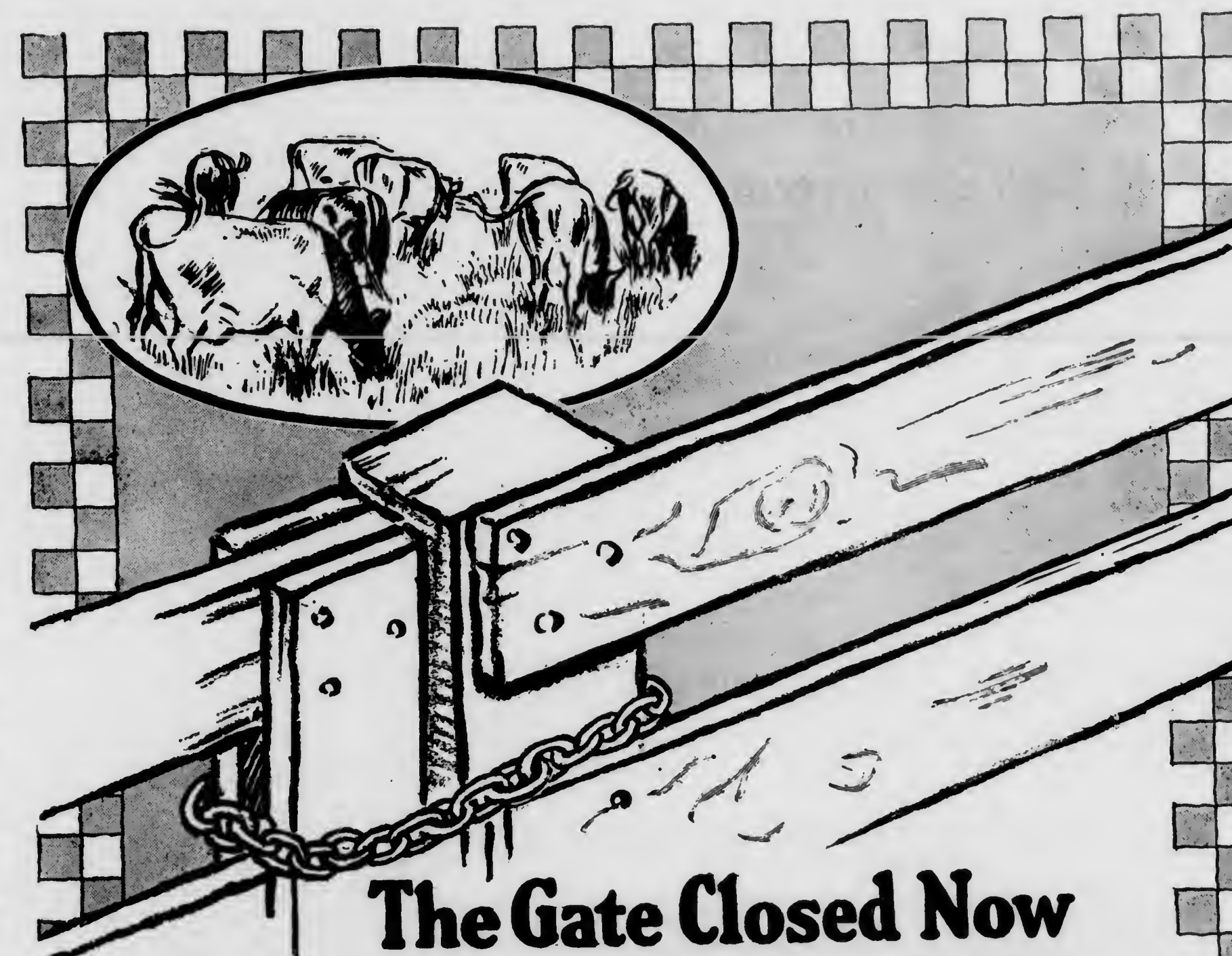
Attending this meeting also was the Board of Directors and Executive Committee of the Inter-State Milk Producers' Association and other invited guests.

Demonstrations by Children From Material

New material projects and talks which have been developed by the Dairy Council staff within the last twelve months were outlined by Lydia M. Broecker, Director of the Nutrition Department. These, in every case, have been arranged to have a definite place in health programs; from kindergarten through high schools, for Normal schools, Parent-Teacher groups, women's clubs and rural work.

Demonstration by Children from the Ferguson School

"Little Prince Hansa", was presented by children from the Ferguson School as a demonstration in free dramatics. The simplicity and effectiveness of this dramatized story, led by Clarence Schon, of the Council's Department of Health Dramatics, was shown in the fact that



The Gate Closed Now Means Plenty of Pasture in June

TELL the cows it's for their own good you're keeping the gate closed when they get to bawling and sniffing the freshness of new spring grass after an April shower.

If they're turned in now to trample sod left soggy from the spring thaw and April showers, they'll injure the roots, they'll crush the tender blades and that pasture will dry right up when summer drought comes on. When July brings its flies and heat, they'll need the grass to keep up the milk flow. It will take more feed to keep up the milk flow than it will take to keep them off the grass now. Feed Purina now just as in winter and get more milk and more money off the pasture later. Order it from the store with the checkerboard sign.

PURINA MILLS, 854 Gratiot Street, St. Louis, Mo.
Eight Busy Mills Located for Service

Write us for a Purina Cow Booklet—free

PURINA CHOWS
24% PROTEIN COW CHOW
20% PROTEIN COW CHOW
Calf Chow Bulky-Las Pig Chow Hog Chow



the presentation was made with a single one-hour rehearsal.

New Phases of Council Program Outlined

Among the new developments in the program of the Philadelphia Inter-State Dairy Council, discussed by Robert W. Balderston, Executive Secretary, were the following:

1. "Demand for Dairy Council health programs resulted in eighty-four school principals requesting last June

that programs be scheduled for this year. Since that time approximately all of the schools have asked for this work

2. Follow-up literature is now available for a large proportion of talks and plays. Efficient distribution has been secured by offering the literature to schools in advance of the program and in the specific quantity necessary for individual use.

3. There has been an increase in adult

group programs. In addition to the cooking demonstrations and moving picture showings, the illustrated lectures for women's clubs have proved popular.

4. The financial budget for the year indicates the following proportion for expenditures:—Publicity 7.5%; Nutrition 28.5%; Quality Control 33.5%; Plays and Talks 16.15%; Special Activities 5.5%; State Dairying 3%; National Dairy Council 3.8%."

(Continued on page 10)

Have You Heard About THE NEW McCormick-Deering Spreader?

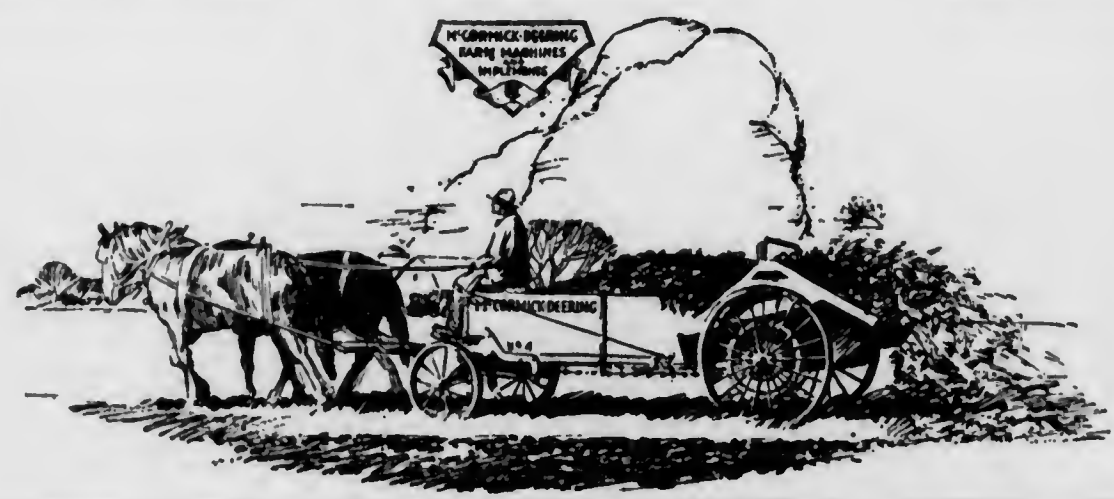
It is every inch a practicable, serviceable spreading unit with exclusive features, built to meet present day farming requirements. In reality the New McCormick-Deering belongs to the future, because its design is in advance of the times. It is in no sense a built over model, but a distinctly new type. Light of draft because of the use of eight roller bearings at frictional points, easy to load because it is low to the ground, thorough in spreading because of its wide-spread spiral and two beaters, inexpensive because of assured efficiency over a long period of years—this machine is attracting the interest of all those farmers who have manure to spread. And it is well worth your while to see it on display at the nearest dealer's or branch house.

International Harvester Co.
of America

PHILADELPHIA

HARRISBURG

BALTIMORE



Farmer Jones is a Heavy Depositor

It's not luck but good farming practice that makes Mr. Jones prosperous. He gets good crops and his clover yield is always wonderful.

Mr. Jones knows that every kind of plant needs lime which it takes from the soil; and he knows that the lime which the plants take out must be replaced. So he uses Warner's LIMOID regularly.

LIMOID is pure hydrated lime which thoroughly penetrates, sweetening and loosening sour, acid soils. It puts the soil in better condition for bigger finer crops and thus helps the bank account grow.

LIMOID is easy to spread and comes in handy 50-lb. paper bags. It will pay you to write for the name of the nearest LIMOID dealer and interesting, worth while information on liming the soil for extra profit. A post card will do.

WARNER'S

"LIMOID"

Charles Warner Company

PHILADELPHIA

WILMINGTON, DEL.

NEW YORK



Read the advertisements printed monthly in the Milk Producers' Review. These advertisers will gladly answer any inquiries you may make. Don't neglect to tell them that you saw their "ad" in the Milk Producers' Review.

Should Minerals Be Added to Dairy Rations

(Continued from page 2)

Preliminary experiments indicate that dolomitic limestones, which are high in magnesium may be used satisfactorily as a source of lime.

If there is not 20 per cent of high-phosphorus feeds in the concentrate mixture (wheat bran, wheat middlings, linseed meal, and cottonseed meal), it is best to use 3 to 4 pounds of bone meal or spent bone black with each 100 pounds of the concentrate mixture, instead of using the limestone, wood ashes, or marl. Bone meal and spent bone black supply both calcium and phosphorus, while limestone, wood ashes, and marl furnish lime, but practically no phosphorus.

If plenty of alfalfa, clover, soybean or legume hay is fed, then there may possibly be no advantage in adding a calcium-rich mineral supplement to the ration. However, even with legume hay available for winter feeding, it can do no harm and may do good to add one of these lime carriers to the ration.

In many mixed feeds for dairy cows, there are now included one per cent of ground limestone, one per cent of bone meal, and one per cent of common salt.

This seems to be a sound practice, considering the fact that most dairy cows do not secure an abundance of legume hay.

Feed Calcium Supplements on Pasture

Fresh, green crops contain an especially large amount of vitamin needed to enable animals to assimilate calcium. Therefore, the best way of replenishing the calcium in the cow's body, which may have been seriously depleted by high milk production during the winter feeding period, is to feed a calcium-supplement when she is on pasture.

Therefore, it is especially important to mix one of the calcium-rich supplements with the concentrate mixture fed to cows on pasture. It is probably best to use more of the calcium-supplement than for winter feeding. As much as 4 to 5 pounds of one of the calcium-supplements may be mixed with each 100 pounds of concentrate mixture. If this mixture should not be very palatable to the cow, the allowance of the mineral supplement may be reduced somewhat.

When the cows are not fed any concentrates during a part of the pasture season, the calcium-supplement may be mixed with salt and the cows allowed free access to it. A mixture of 1-8 salt by weight and 7-8 limestone, wood ashes, marl, or bone meal may be used for this purpose.

Guard Against Gorter

If trouble has been experienced from gorter or "big neck" in calves, this may be prevented in the future by giving potassium or sodium iodide to the cows through the gestation period. Where there is no trouble from gorter this treatment is not needed.

*An address presented by Dr. F. B. Morrison, Director of Agricultural Experiment Station, New York.

Test the Seed Corn

As soon as it is convenient, test the seed corn for germination. Perhaps it will grow and then you will not have to order a supply. But if it does not germinate satisfactorily you will want to know it early enough to get seed elsewhere.

American Dairy Federation Third Annual Pilgrimage

The Third Annual Dairy Pilgrimage of the American Dairy Federation will be held, as heretofore, at Washington, D. C., May 8 and 9, 1928. Headquarters will be at the Harrington Hotel and meetings will be held at the headquarters of the U. S. Bureau of Agricultural Economics; the U. S. Bureau of Dairy Industry and the U. S. Dairy Extension Farm, Beltsville, Md. A joint session will also be held with the Chamber of Commerce of the United States on the second day of the session.

The first day's session, on Tuesday, May 8, will be held in the Bureau of Agricultural Economics, where addresses will be made by Lloyd S. Tenney, Chief of the Bureau on "The Scope and Objective of the Bureau." Dairy Marketing Research will be the subject of an address by Roy C. Potts. Chris. L. Christianson will make an address on "Co-operative Marketing" and J. Clyde Marquis will address the meeting on "Dairy Market Information."

The afternoon session will be held in the headquarters of the Bureau of Dairy Industry, where luncheon will be served at 12:00 noon.

This session's program includes addresses by J. H. McClain on "Production"; Ernest Kelley, on "Market Milk"; L. A. Rogers on, Chemistry, Bacteriology, Butter, Cheese, Condensed Milk, By-products, etc.

At 6:30 P. M., a dinner will be given at the Harrington Hotel, in honor of official Delegates to the World's Dairy Congress.

Wednesday session, May 9th, will open with a visit to the U. S. Experiment Station at Beltsville, Md., where addresses will be made by R. R. Graves, Mr. Sweet, Mr. Forman, Mr. Converse and other members of the Staff.

At 1:00 P. M., on Wednesday a joint luncheon will be held with the Agricultural Section of the Chamber of Commerce of the United States. The general subject of discussion will be "Team Work in Agriculture." A. J. Glover, Editor of Hoard's Dairyman will make an address on "Quality Products vs. Quantity Products."

For information regarding railroad rates and special features of the program, communicate with A. M. Loomis, secretary, American Dairy Federation, 630 Louisiana Ave., Washington, D. C.

National Dairy Show to Return to Memphis, Tenn.

The National Dairy Show will hold its 22nd annual Exposition in Memphis Tennessee, October 13th to 20th, 1928. This will be its second year in that city where it will again be held in connection with the annual Tri-State Fair.

Plans have been made for even a larger dairy show and improved equipment will make it possible to present the exposition in much better form than last year. Additional space for 800 more cattle and a new judging pavilion with a large ring are to be constructed.

Increased space for dairy barn and farm equipment, machinery and supplies it to be provided.

Programs are now in preparation which promise to make the 1928 show bigger and better in every respect.

Two farm inventories, taken a year apart, show whether a farm business is getting ahead and how much.

Feeding Dairy Cows in Summer

(Continued from page 1)

ments have shown that cows producing not over 20 pounds of milk per day will do pretty well on good pasture with no additional feed. They may produce a little more milk if fed some grain, but the increased flow of milk will not ordinarily pay for the grain fed.

In addition to good pasture, cows producing more than 20 pounds of milk daily should be given 1 pound of grain to each 4 to 6 pounds of milk produced. The grain may be a mixture of the ordinary farm grains, such as corn, oats, wheat bran, or barley, and should always be ground. For cows producing more than 35 pounds of milk daily, the grain mixture should contain one high protein concentrate, such as the oil meals; otherwise the ration will be too low in protein in comparison with the carbohydrates and fats.

Succulent Feeds Needed When Pastures Are Poor

During July and August, pastures in most sections are short because of dry weather and being grazed too closely. If there is any grass it is not succulent and is unpalatable. Consequently, cows will not consume enough for high milk production. If the cows are in good condition when they are turned on pasture in the spring, there will be a gradual decrease in milk flow during the summer, because on this poor pasture they are drawing on their stored-up flesh to supply nutrients for milk production. When this body surplus is exhausted there is a much more rapid decrease.

Experienced dairymen know that if the production of their cows has decreased during the hot, dry weather because of insufficient feed, it is difficult and practically impossible to bring production back to normal during that milking period. This is an important fact to remember, especially concerning spring-freshening cows. Not only grain and roughage, but also a succulent feed should be fed at this time.

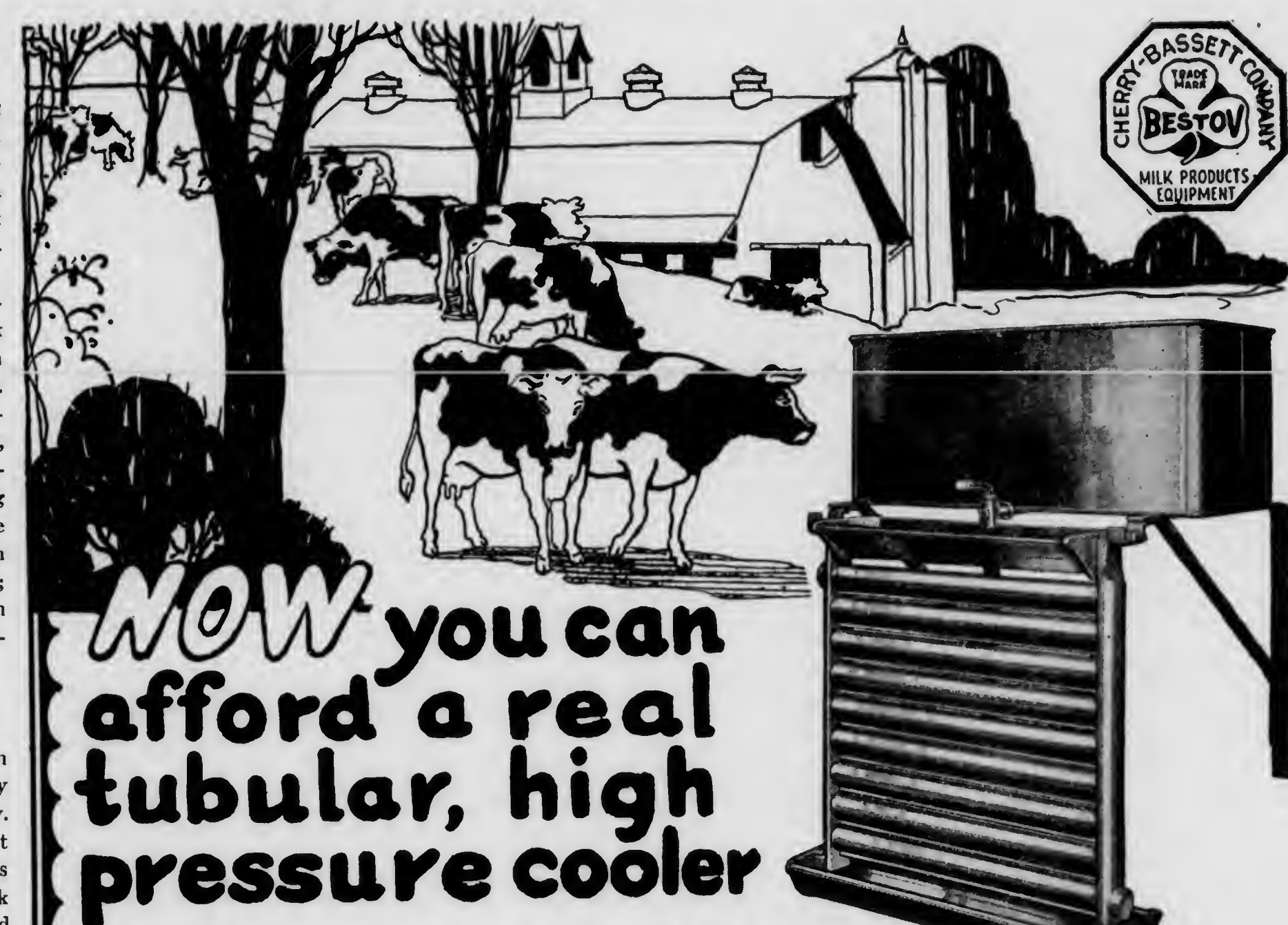
The summer silo is probably the best means of supplementing short dried-up pastures. For a herd of 12 to 20 cows, a silo from 10 to 12 feet in diameter is best suited for this purpose because the silage can then be fed out fast enough to prevent spoiling. If all the silage is not fed during the summer it can be fed the following winter or the next summer. Silage will keep for several years.

Supplementary Pasture Crops

Supplementary pasture crops instead of summer silage are used by many dairymen to prevent the midsummer drop in milk flow. In many sections sweet clover has proved very satisfactory for this purpose. It does well at this season and has the advantage of being a legume and consequently contains a large amount of protein and lime. Alfalfa can also be pastured at this time.

Many combinations of legumes, such as peas, vetches, and soy beans, with grains, such as corn, wheat, oats, and barley, can be grown and fed green. Successive plantings of these crops will often provide succulent feeds over an extended period.

Although it is essential that grain be fed to high-producing cows on pasture, good pasture probably furnishes the cheapest source of milk-producing nutrients of any farm crops. Poor pastures are like poor feeds of any kind.



Now you can afford a real tubular, high pressure cooler

At last you can purchase a cooler of the highest efficiency and durability with considerably less money than ever before possible. The Oriole Cooler deals a smashing blow to the high cost of genuine tubular coolers for the dairy farm. Every dairyman can now afford a cooler of this type—the Oriole.

Due to unique methods of manufacture we finally have the ideal cooler the dairy industry has been waiting for—a cooler with Rolls Royce durability that sells at Ford prices! There will be no excuse now for milk losses resulting from improper cooling.

Tubular Coolers Endorsed as Most Efficient Quality control associations, inspectors, health officials, agricultural colleges: all authorities agree that the tubular type of milk cooler, which employs cold water circulating under pressure through the tubes, while the milk flows down over the outside, is the most efficient and desirable kind of cooler for the dairy. The Oriole is endorsed by such authorities everywhere. It is the type of cooler most easily kept clean and sanitary and is genuinely tubular.

Guaranteed in Every Respect The Oriole is guaranteed without restriction against imperfect workmanship or materials. Every cooler is further guaranteed to withstand without leaking a pressure of 75 pounds to the square inch. If you have been a user of other circulating coolers you will appreciate this guarantee.

Make Your Last Cooler Purchase Now Once you have an Oriole there will be no necessity to ever replace it, for it is built of copper and bronze throughout—everlasting metals. Nothing can rust out; nothing can wear out and the workmanship employed in making this cooler is absolutely unsurpassed.

Which Size Should You Buy? Oriole coolers are made in two sizes. Size A cools 35 gallons of milk an hour and size B cools 50 gallons an hour. Both sizes consist of 1 1/2" diameter seamless copper tubes spaced so that cleaning between them is easy. A lip, formed into the tubes when made, runs along their under side, providing a guide for the flow of milk from one tube to the next. The water

CHERRY BASSETT CO., 2324 Market St., Phila., or Russell and Ostend Sts., Baltimore

flows through these V-shaped flanges as well as the balance of the tube interior so that all possible cooling surface is utilized. This space is "dead metal" on other tubular or corrugated coolers. Upper and lower troughs are removable without use of tools. Reservoir, troughs, and all other parts have only smooth round turned surfaces—no square corners hard to keep clean.

Specifications
Capacity H. Cooler Length Shipping Capacity
Size Gal. H. Reservoir Overall Weight Reservoir
A 35 33" 21 1/2" 70 lbs. 10 gal.
B 50 33" 31 1/2" 85 lbs. 10 gal.
Sour Milk Losses Would Buy An Oriole
Most losses are due to improper cooling. With the Oriole you will always cool sufficiently low—quickly. A few days' losses would amount to more than the cost of this cooler. Buy yours now before the first touch of warm weather overtakes you.

Inspection Free Order an Oriole Cooler, unpack and set it up. Inspect it thoroughly. If the design, workmanship and quality does not meet your approval entirely pack the cooler up again and ship it back at our expense. Your money will be refunded without question. No offer could be fairer than this.

Remember our unlimited guarantee and this free inspection offer. You risk nothing. Order your Oriole today.

Oriole Milk Cooler

HIGH PRESSURE NO LEAKS

Philadelphia Inter-State Dairy Council

General Offices
219 N. Broad St., Philadelphia

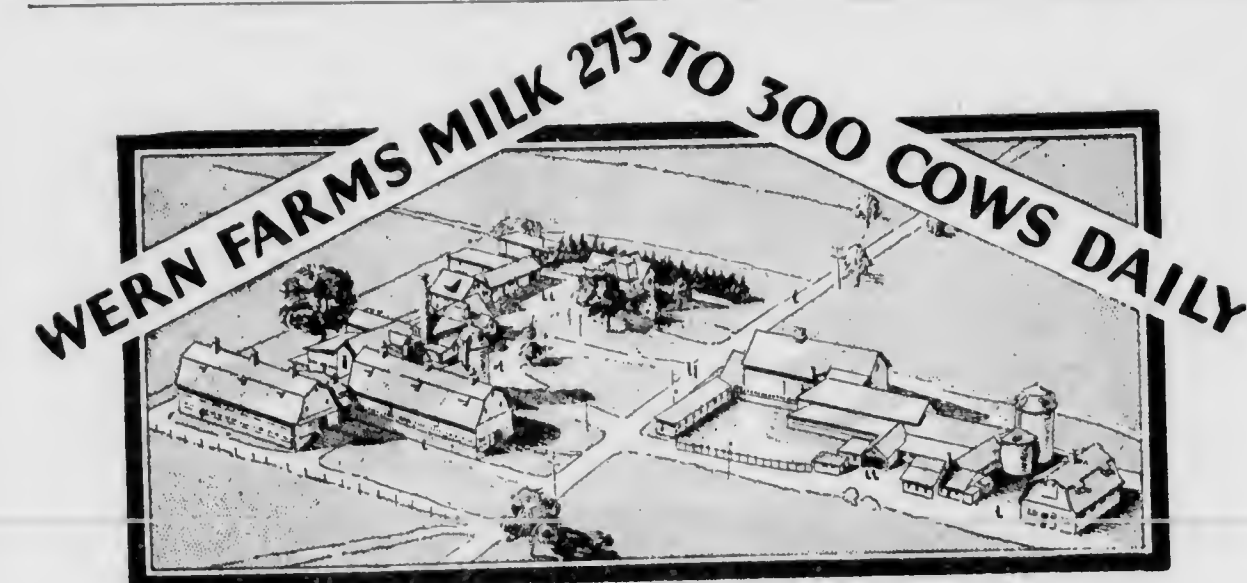
A cooperative movement established for the dissemination of information and publicity pertaining to the production and distribution of dairy products and their food value in nutrition.

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WITH UNIVERSALS

"Wern Farms Certified Milk", from Waukesha, Wis., is widely and favorably known in Chicago and many neighboring cities. It is produced by a herd of 275 to 300 cows, of which about 50 per cent are registered, purebred stock.

These high-priced, high-producing cows are milked twice a day by Universal Milkers — used on yearly test and record work as well as for daily commercial production.

This is one of thousands of excellent herds milked by Universal Milkers — for the simple reason that the Universal maintains the highest standards of cleanliness, and at the same time keeps down milking costs.

Write for 24-page free catalog that describes and illustrates Universal Milkers in detail.

The UNIVERSAL MILKING MACHINE COMPANY
Dept. IM Waukesha, Wis. Syracuse, New York

MILKS LIKE THE CALF



Universal
natural milker



Let Us Design Your Stationery

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WEST CHESTER, PA.

Seeds That Grow

Vegetable, Flower, Grass and Grain Seeds

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MARTIN C. RIBSAM & SONS CO.

143-5-7 E. Front St., Trenton, N. J.
Free Parking Space

If Your Dealer does not handle

LE ROY MANURE SPREADERS

Write LeRoy Plow Co., LeRoy, N.Y.

Stuck

The respondent was being examined in lunacy proceedings.

"Who was our first president?"

"Washington."

"Correct." "Who was our second president?"

"John Adams."

"Correct."

Then there was a pause.

"He's doing well," whispered a friend to the lawyer. "Why don't you keep on?"

"I ain't sure who was the third president myself."

Fertilizers From the Air

Chemical fixation of nitrogen derived from the air is an industrial process that has advanced rapidly in recent years. This infant industry is now producing synthetic nitrogen salts in such quantity that it supplies, it is estimated, at least one half, if not more of the world's supply of inorganic nitrogen. Fifteen years ago much less than 10 per cent of the world's supply was derived from the air by chemical means. These comparatively new products are becoming more important, year by year, in the fertilizer industry.

Pennsylvania Has Modern Laboratory for Study of Animal Diseases

Just as the Bureau of Animal Industry, Pennsylvania Department of Agriculture, blazed the way 30 years ago with the establishment of the first laboratory, by any state government devoted to the study of transmissible animal and poultry diseases, it now steps into the foreground again with the construction and equipping of one of the most modern laboratories for this work in the United States.

This laboratory is located on an 80-acre farm on the west side of the Susquehanna river near Harrisburg. In addition to the laboratory, which has the very latest equipment for the study of transmissible animal and poultry diseases, ample room is provided for observing these diseases under actual farm conditions.

Modern Equipment

The laboratory building is a T-shaped, brick structure and contains all the necessary equipment and rooms for autopsying and for microscopical work, as well as a museum, library, and administrative offices. Several inexpensive small buildings have also been constructed on the farm for housing the animals and poultry.

The scope of the work which will be carried on involves all types of scientific investigations concerning the cause, nature, control and prevention of transmissible diseases of animals and poultry, including the control of parasites.

Hog cholera, bovine tuberculosis and abortion, rabies and other transmissible diseases of dogs, sheep diseases, and parasites of swine, sheep, dogs and poultry will be carefully studied with the idea of determining practical prevention and control measures under Pennsylvania conditions.

For the purpose of observation and study, 20 head of cattle, 12 pigs, 70 sheep, 100 dogs, 500 chickens and many rabbits and guinea pigs are now kept on the farm.

100,000 Specimens Examined

Seven trained veterinarians are now at work in the new laboratory and blood samples, rabid dog brains and other specimens from all kinds of animals and fowls are being examined at the rate of 2,000 or more a week. More than 100,000 specimens were examined last year.

The Bureau of Animal Industry farm is under the direction of Dr. T. E. Munce, State Veterinarian, with Dr. M. F. Barnes, a national authority on bovine abortion, in charge of the laboratory work.

Previous to its recent removal, the laboratory work was conducted by the Bureau in laboratories located in the Veterinary School of the University of Pennsylvania in Philadelphia.

Alfalfa Needs Lime

Successful growers of alfalfa find that lime and inoculation are very important in the growing of this valuable legume. Where more than a ton of lime is needed, however, farm crops specialists of the Pennsylvania State College suggest that part be put on two or three years before seeding and then another test be made and the remainder applied the year before seeding.

Woman's work may never be done, but unless she takes a little time to rest and to enjoy herself she may get too discouraged to keep going.

Eastern States Farmers Exchange Holds Annual Meeting

The Tenth Annual Meeting of the Eastern States Farmers Exchange was held in Springfield, Mass., March 7th, 1928.

During 1927 the Exchange purchased for its members \$7,722,900 worth of commodities, mostly feed and grain, fertilizer and seed. The Exchange also does a considerable volume of business by mail in vitamin tested pure cod liver oil, and high quality open formula paint. During 1927 patronage savings and feed contract refunds accumulated for distribution among the membership this spring amounted to \$109,767, an increase of 17% over the total refund of 1926.

The Eastern States Farmers' Exchange membership increased 4000 during 1927, and the Exchange at the close of 1927 was serving more than 22,000 farmers in the New England States, Delaware, Maryland and Pennsylvania.

Robert F. Brinton of West Chester Pa., was elected to the Board of Directors of the Exchange at this annual meeting, while Robert E. Atkinson of Wrightstown, Pa., who was last year elected a Director, was this year elected by the Board of Directors as a member of the Executive Committee.

Montgomery Co. Jersey Cattle Club to Hold Second Annual Field Day

The Montgomery County Jersey Cattle Club, will hold its Second Annual Meeting and Field Day at Many Springs Farm, located at New Centerville, Devon and Walker Roads, two miles from the Devon station on the Pennsylvania Railroad, on May 30, 1928, Decoration Day.

A boys and girls judging contest will be held at 9.30 A. M. Edward A. Stanford, president of the Montgomery County Dairy Institute, will be the Judge and will explain the various points to the boys and girls.

Addresses will be made by H. D. Al-lebach, President of the Inter-State Milk Producers' Association; Robert Eno, of the American Jersey Cattle Club; Dr. Newhans, of the Pennsylvania Department of Agriculture; R. S. Waltz, Montgomery County Farm Agent, James Anderson and others.

The program on the whole is one which should be entertaining as well as instructive.

The Many Springs Farm will furnish milk for your Basket Lunch.

Repair, Oil, and Adjust Harness

Go over all the harnesses, make repairs and grease them thoroughly. See that the harness fits the horse which is to wear it. An ill-fitting set of harness lowers the efficiency of the animal.

Too many roosters in the breeding flock are likely to cause just as much trouble from poor fertility as will a shortage of males. This is especially true when the flock is confined so that the roosters have a good chance to fight. One male for each 15 hens is sufficient in any breed, and for Leghorns and other light breeds not more than five males are needed for each 100 hens.

COW TESTING ASSOCIATIONS

Central Penna. Guernsey Association FOURTH ANNUAL REPORT

The Central Pennsylvania Guernsey Breeders Association operating in several southern central counties in Pennsylvania finished its fourth year on March 1, 1928. The association had 39 whole year members, with two members who were in the association only part of the year.

It is interesting to note that 23 herds, compared with 16 herds last year, averaged over 800 pounds of butter fat for their herds. Fifty cows produced over 400 pounds, as compared to 40 last year.

The results for the four years is as follows:

Year	Average No. Cows	Lbs. Milk	Lbs. Butterfat
1924	188.99	6149	283.3
1925	436.45	6258	294.2
1926	429.17	6847	308.5
1927	525.56	7099	303.3

The records for the whole year members were as follows:

Average No. of cows in the association	525.56
Average per cow, pounds of milk	7099.
" " " pounds of butterfat	303.3
" " " Percentage of butterfat	4.3
" " " Value of product	\$277.16
" " " Cost of Roughage, including pasture	42.25
" " " Cost of grain	60.38
" " " Total cost of feed	102.66
" " " Value of product above feed cost	174.50
" " " Return per \$1.00 expended for feed	2.70
" " " Feed cost per 100 lbs. of milk	1.34
" " " Feed cost per pound of fat	.34

Twenty three herds with an average of five or more cows exceeded an average production of 800 pounds of butterfat during the past year.

Middle Bucks County Association

FIFTH ANNUAL REPORT

The Middle Bucks County Cow Testing Association finished its fifth year on March 1st, 1928, with twenty-two whole year members. In addition two members were in the association part of the year. The total number of cows for all or part of the year was 469.

The record of the five years testing was as follows:

Year	Average No. Cows	Lbs. Milk	Lbs. Butterfat
1924	247.46	7724	284.3
1925	280.08	7549	271.3
1926	406.35	7582	281.1
1927	384.07	7695	301.6
1928	346.56	7879	313.8

The report for the whole year members is as follows:

Average No. of cows in the association	356.56
Average per cow, pounds of milk	7879
" " " Pounds of butterfat	313.8
" " " Percentage of butterfat	4.0
" " " Value of product	\$296.81
" " " Cost of Roughage (including pasture)	61.55
" " " Cost of grain	63.89
" " " Total cost of feed	125.44
" " " Value of product over feed cost	171.37
" " " Return per \$1.00 expended for feed	2.37
" " " Feed cost per 100 lbs. milk	1.59
" " " Feed cost per pound of butterfat	.40

Thirteen herds with an average of five or more cows exceeded an average production of 800 pounds of butterfat during the year.

Montgomery County Association No. 2

LEE A. McCAUSLIN, Tester

During the month of February, 21 herds were on test, with a total of 341 cows in milk. Twenty-eight cows produced over 40 pounds of fat and those over the 50 pound mark (numbered seven). Thirty-two cows produced over 1000 pounds, while 10 produced over 1200 pounds of milk.

Highest herd average milk production:

Owner	Breed	Cows in herd	Average Lbs. Fat
Brinckman, Frank	R. & G. H.	7	887
Overly & Sons, J. L.	R. & G. H.	11	876
Hirsh, Victor	R. H.	13	755
State Hospital	G. H.	42	675
Davis, George	R. & G. H.	21	668

Highest herd average butterfat production:

Owner	Breed	Cows in herd	Average Lbs. Milk
Brinckman, Frank	R. & G. H.	7	80.9
Overly & Sons, J. L.	R. & G. H.	11	28.9
Buckley, Daniel	R. G. & H.	6	28.0
Davis, George	R. & G. A.	21	27.7
Stephens, Williams	R. A.		

In the Honor Cow production class with 40 pounds of fat or more during the month were the following: State Hospital, with 6 cows; William Stephens, 2 cows; Wm. Pratt, 2 cows; George Hewer, 3 cows; Erdenheim Farms, 2 cows; and the following with one cow each. Overly & Sons, J. H. Gennert, Lindquist & Son, Victor Hirsh, Tenner Bros., Frank Brinckman and George Davis.

Farm Labor Conditions in New Jersey

It is estimated that the supply of farm labor in New Jersey on March 1st, 1928, was 100 per cent of the normal and the demand 88 per cent of a normal, making the potential supply about 118.5 per cent of a normal, as compared with 110.5 per cent, the February 1st potential and 98.5 per cent, the March 1927 supply.

Cornstalks House Borers

In cornstalks remaining on feed lots the corn borers usually stay in them throughout the winter. Where the stalks are completely trampled under the surface of liquid manure or mud the borers are destroyed, but if any parts of the stalks remain protruding from the surface the borers take refuge in them and may survive.

Pasture is the cheapest feed you have—



PASTURE is admittedly an almost perfect feed, but it is seldom a complete ration, particularly in the early spring months. Every dairyman knows that pasture is his cheapest feed because the cows help themselves and no labor is required.

A cow in full flow of milk, on good pasture, should receive 20% of her total nutrients in the form of a suitable grain ration. This helps keep up the normal milk yield for the season, and will keep her in fair flesh so that she will not have to be built up again for freshening. Cows fed a supplementary grain ration while on pasture will produce 25% more milk year after year, than when the grain is cut off during the summer.

For more than twenty-five years UNION GRAINS has proved the finest possible supplement to pasture feeding. It is palatable and cows eat

it with relish. Its protein, derived from many sources, makes UNION GRAINS one of the safest rations that can be fed during the pasture season, or any other season. It is perfectly balanced to feed while the cows are on pasture, and this is highly important in maintaining a high milk yield, good health and regularity of breeding.

If you have not tried feeding UNION GRAINS with pasture, order a supply today before you put your cows out. Feed them four to six pounds of UNION GRAINS daily and note the improvement in condition, as well as the continued normal milk yield. Once tried, you will be a regular UNION GRAINS booster.



UNION GRAINS
THE FIRST DAIRY FEED MADE

Makers of UBICO World Record Feeds

UBICO 32 Ration (32% Protein). For mixing with home-grown grains. UBICO Special Dairy Ration (20% Protein) — sweetened.

UBICO Calf Meal
UBICO Pig and Hog Ration
UBICO Horse Feed
UBICO World Record Buttermilk Egg Mash
And other UBICO Rations

UBICO Buttermilk Starting Mash with Cod-Liver Oil
UBICO Fattening Mash
UBICO Scratch Feed
UBICO All-Mash Rations

FOR SALE—REGISTERED HOLSTEINS

Bradford County Co-operative Holstein-Friesian Association

Through this Association, there is now available for sale registered Holsteins of all ages, both sex, many excellent cows. Most cattle are from accredited Herds, and all are Tuberculin tested. Cow Testing Association, private and official records are available as evidence of producing ability. Breeding of the most popular and dependable blood lines. Buyers provided with most painstaking services for selection and shipment.

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It is better to feed silage to dairy cows once a day over a longer period than to feed it twice a day for a shorter time if no other succulent feed can be had.

Written Farm Leases Desirable Say U. S. Economists

Farm leases should be carefully drawn up, says the United States Department of Agriculture, because it is dangerous for the contracting parties to slight the business of arriving at a complete understanding on all points where their interests may clash. Many, and perhaps most, rented farms are leased orally, without printed or written memoranda of any kind. Indeed, some landlords and tenants take pride in being informal to that extent. Yet the practice is responsible for many disputes that written agreements would obviate or make easy to settle.

Careful consideration of lease agreements, the department declares, promotes mutual satisfaction, tends to lengthen the period of tenancy, and encourages the adoption of improved farming methods. To put a lease in writing clears up points that might have remained obscure, and is thus worth while even if the lease is not looked at again. Standard printed forms, with a few modifications or additions, will generally suffice where the farm is to be leased for a cash rental. For share leases, however, printed forms containing only generalities may prove inadequate.

Leases Should Cover Details

Share agreements are often considerably detailed. In such agreements consideration must be given to the capital, credit, ability, experience, and purposes of both landowner and tenant. It may be useful also to particularize the conditions of farming and the opportunities of the farm. Printed forms suitable for such leases may not be readily obtained. Usually, says the department, it is best for the contracting parties to write their own lease embodying the various stipulations. Sometimes, where considerable values are involved, it may be desirable to obtain the advice and assistance of a lawyer.

Properly drawn leases will not, however, prevent trouble unless both parties have the right attitude. Approximately 3,000,000 American farmers operate land part or all of which they do not own. It is thus obvious that harmony in the landlord-tenant relationship is important in our agricultural economy. It may be promoted not only by attention to the details of lease agreements, but by taking care that the bargain as a whole is mutually desirable and satisfactory.

Report of the Field and Test Department Inter-State Milk Producers' Association.

The following statistics show the aggregate operations of all the Inter-State Milk Producers' Association field men in connection with testing, weighing and general membership work, for the month of February, 1928.

No. Tests Made 6858
No. Plants Investigated.. 87
No. Membership Calls .. 54
No. New Members
Signed 20
No. Cows Signed 215
No. Transfers Made 35
No. Meetings Attended.. 13
No. Attending Meetings.. 1819

Joint Annual Meeting Of Delaware County Agricultural Associations

The Delaware County Agricultural Extension Association and the Delaware County Farm Products Cooperative Association (the organization which conducts the Delaware County Farm Products Show) held their annual joint meeting at Strath Haven Inn, Swarthmore, Delaware County, Pa., on March 7th, 1928.

At a business session the Agricultural Extension Association elected the following officers to serve for the ensuing year. President, Paul L. Willits; Vice President, William P. Smedley; Secretary, Mrs. Robert W. Balderston, Media, Pa.; Treasurer, S. L. Smedley, Jr.

The Delaware County Farm Products Cooperative Association elected the following Board of Directors.

To serve for three years: Paul L. Willits, Mrs. Paul L. Willits, and Norman Passmore. To serve for two years: Mrs. R. W. Balderston, Wm. P. Smedley and Michael Halligan. To serve for one year: S. L. Smedley, Jr., Howard H. Cloud and Frank B. Wolf.

Following the business session the groups were entertained with a "Radio Talk" by Miss Adelaide Bemis, of the Philadelphia Inter-State Dairy Council.

J. M. McKee, executive secretary of the Pennsylvania Joint Committee on Rural Electrification, made an interesting address on the development of the state wide activities on the part of the State Council of Agricultural Associations, which organization has been legally responsible for the success of the movement toward rural electrification in Pennsylvania. The value of electricity on the farm is fully demonstrated in booklets prepared by the Joint Committee, which are available upon request to his office in Harrisburg, Pa.

Prof. H. G. Niesley, Assistant Director of Extension, Pennsylvania State College, made an interesting address on, "European Methods in Agriculture," and particularly in relation to the dairy industry.

Banner Year for Ayrshires

The improved condition of dairying and the increased activity of the purebred trade are reflected in the larger volume of business transacted during the past year by the Ayrshire Breeders' Association, according to national secretary, C. T. Conklin. An increase of 10% in the number of Ayrshires registered and 15% in the number transferred as compared with 1926 is reported. Furthermore, for every eight animals registered during the year, seven have been transferred which is indicative of the active demand for pure bred cattle. During the last two years there has also been a steady increase in prices for both grade and pure bred Ayrshires.

During the year a record for the establishment of new herds was made, while 181 breeders were admitted to membership in the Ayrshire Breeders' Association. New York, Pennsylvania, Massachusetts and Vermont were the leading states in volume of Ayrshire business.

An increasing export trade is being developed by American breeders, especially with the countries of Central and South America. During the year shipments were made to Mexico, Porto Rico, Republic of Colombia, Brazil, Salvador, Honduras, Bermuda, Hawaii and Turkey.

Pure Food Agents

Prosecutions for the violation of the oleomargarine law in Pennsylvania increased slightly in 1927 over 1926, due to the sale of oleomargarine having a slight yellow color which is prohibited, according to the State Bureau of Foods and Chemistry.

It is explained that the law is very rigid in its provisions to protect the public.

Several of the recent prosecutions were the result of the manufacture of oleomargarine from oils having a pronounced yellow color and was not due to the deliberate adding of color to the manufactured article, Dr. James W. Kellogg, director and chief chemist of the Bureau explains. However, the parties responsible have arranged to discontinue the sale of the colored product in this Commonwealth.

Enforcement of the oleomargarine law in order to protect both the producers of genuine butter and consumers who desire this product has been one of the longest and most persistent fights for pure foods that has ever been necessary in Pennsylvania, it is said. While the number of prosecutions now is practically negligible compared to the number ordered 17 years ago, nevertheless during this period, a total of 625 prosecutions has been necessary. In several recent years a number of these cases has been reduced to as low as three. The 10 prosecutions in 1927 was the highest number since 1920.

Fertilizer Makes Potatoes

Big yields of farm crops can not be grown without plant food. Ninety-four per cent of the 187 members of the 400 Bushel Potato Club last year used complete fertilizers.

Inter-State Milk Producers' Association

Incorporated
Flint Building, 219 N. Broad St., Philadelphia, Pa.

Representing over 21,000 Dairy Farmers in the Philadelphia Milk Shed.

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Report of the Quality Control Department, Philadelphia Inter-State Dairy Council.

The following is a report of the work done by the Quality Control Department of the Dairy Council, for the month of February, 1928.

No. Inspections Made.. 1,924
No. Sediment Test 1,511
No. Meetings Held 6
Attendance 995
No. Man Days, Fairs and Exhibits 6
No. Miles Traveled ... 14,498
No. Temp. Permits issued up to February 31, 1928 24,835
No. Permanent Permits issued up to February 31, 1928 11,367
During the month 64 dairies were discontinued from selling for failure to comply with the regulations—31 of which were reinstated before the month was up.
To date 94,151 farm inspections have been made.

Advisory Board of Dairy Council Holds Annual Meeting

(Continued from page 9)

Advance in Quality Control Standards

Significant progress in quality improvement of milk was reported by C. I. Cohee, Director of the Quality Control Department. Three outstanding points were indicated:—

1. The Board of Directors of the Dairy Council has authorized a ruling that after June 1st, 1928, all milk shipped to co-operating dealers must be from farms holding permanent permits from the Quality Control Department. This ruling follows a four-year period of educational preparation through the territory supplying milk to Philadelphia.
2. The entire process of recording dairy records has undergone a change. The system now being instituted will furnish detailed information concerning individual farm standards and production.
3. Effort will be made during the coming year to exert a control over the bacteria count of grade "B" milk similar to that in use for grade "A". Vast improvement in quality has already been shown in decreased amounts of rejected milk.

Outline of Health Project at Girls' High School

A health project conducted in the Girls Southern High School, Philadelphia under Dr. Lucy Wilson, was described by Miss Rhea Baker. The honor students participating in the project devoted their study during the first term to personal health problems, and during the second term to community health. The Dairy Council co-operated in such study as related to the milk supply of the city; its distribution and safeguards.

Do Odd Jobs Early

Early spring days can be used for cleaning up the trash, sticks, and tin cans accumulated around the yard during the winter. With flytime not far away, this is a good time to repair and paint screens. The garden tools also can be repaired and the lawn furniture and trellises given a coat of paint.

Pennsylvania Plan for Bovine Abortion Control

When the Bureau of Animal Industry of the Pennsylvania Department of Agriculture launched in 1920 its plan for the control of bovine abortion, a disease which has caused losses of millions of dollars to the dairy industry, little did it anticipate the national and even international attention that would be drawn to its efforts.

The abortion disease is known throughout the dairy world and the plan adopted in Pennsylvania, which is based upon sanitary principles, repeated blood testing and the elimination of reactors, was the first systematic effort for control and eradication to be made on a statewide scale.

Met With Objection

"When the Pennsylvania Abortion Plan was first proposed it met with objections and opposition, as is usually the case with all new things," states Dr. T. E. Munce, director of the Bureau. "Many breeders, and indeed some veterinarians, thought the plan neither feasible nor necessary and suggested that not enough was known about the disease to justify our attempting to prevent and eradicate it and the time was not ripe for launching our plan for that purpose."

"Some of us believed differently, however, and in the face of existing opposition and discouragement the Pennsylvania Plan was put forth and made available in 1920 for those who desired to take advantage of it.

"We believe that the adopting of such a Plan would benefit the cattle industry in many ways: (1) Improve the quality of the herd. Increase the quantity and quality, and decrease the cost of production (2) Establish a definite means of prevention and control for those who desired it. (3) Encourage stockmen to establish abortion-free and more highly efficient herds. (4) Provide a safe place for prospective purchasers to obtain new animals."

The success of the plan is indicated by the fact that the testing for abortion is being done in approximately 800 herds, 250 of which are signed up under the Plan and 49 have been issued certificates. The 49 abortion-free herds average 34 cattle per herd.

When Professor B. Bang of Copenhagen, Denmark, the discoverer of the abortion disease germ, visited in this Commonwealth recently, he described the Pennsylvania Abortion Disease Plan for control as ideal.

Other States Adopt Plan

A number of other states as far west as the Pacific Coast have adopted and are now following out the Pennsylvania Plan for the control of this disease. Washington adopted it in 1927.

"The Country Gentleman," a national farm journal, published recently a feature story entitled "The Nefarious Bug of Dr. B. Bang" in which appeared a fascinating description of the way Dr. M. F. Barnes of the Pennsylvania Bureau of Animal Industry worked more than 10 years in developing the basic principles for the control of bovine abortion. In the words of the writer of that article, "It was M. F. Barnes who, of all American men, said 'We can wipe out this contagious abortion!'"

The amount of milk produced for each cow in the United States in 1916 was 3700 pounds; in 1921 it was 4000, and in 1926 it was 4700 pounds.

Farm Co-Ops Engage In Many Activities

Besides Selling

So much attention has been directed to the selling end of the farmers' co-operative movement that some of its other aspects are in danger of being overlooked. Cooperative buying, for example, takes care of several hundred million dollars worth of the farmers' purchases annually. Many associations handling cream, cheese, and fruit buy supplies used in preparing their products for market. Such purchases are not at present recorded in the statistics of cooperative buying. The United States Department of Agriculture expects to have fairly accurate statistics this year on cooperative purchases. Meantime, it points out that at least 50 per cent of the farmers' business organizations in the United States are engaged in some form of cooperative buying.

Out of 10,803 associations listed in the department records, 5,386 reported cooperative purchases last year. Among the commodities purchased were feeds, fuel, containers, seeds, fertilizers, building materials, fencing, implements and machinery, hardware, spraying material, and general merchandise. Some associations specialize in purchasing things required for production on the farm. Business of this kind is increasing.

Many important activities carried on by farmers' associations can not be measured in purchases and sales. All told, there are more than 69,000 agricultural associations in the United States. Among them are educational associations, production associations, credit societies, rural telephone companies, and mutual fire insurance agencies. Fire insurance particularly is an important business carried cooperatively by farmers' organizations. It is estimated that farmers' mutual associations carry fire risks amounting to more than \$10,000,000 annually.

Pennsylvania Farmers

Buy Cooperatively

In order to purchase their supplies cooperatively, a group of Pennsylvania farmers organized the Newtown Co-operative Association, Newtown, Pa., in 1922. Early in 1925 the association had 55 members, all of whom were farmers. Goals are sold to members and non-members, also, at wholesale. Among the commodities handled are: lime, fertilizer, seed, feed, twine, poultry supplies, spray materials, seed potatoes, baskets. Sales for 1927 amounted to \$57,566 of which sales to members accounted for \$37,753; to non-members, \$17,451; and at wholesale, \$2,362. Net earnings were \$1,094, of which \$755 was distributed as a patronage dividend and \$339 was carried to surplus.

Now this is the law of the jungle
As old and as true as the sky;
And the wolf that shall keep it may prosper,
But the wolf that shall break it must die.

As the creeper that girdles the tree-trunk
The law runneth forward and back—
For the strength of the Pack is the Wolf,
And the strength of the Wolf is the Pack.

—Kipling.

According to federal reports it costs milk dealers \$30,000,000 a year to replace milk bottles lost or broken.

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Aunt Ada's axioms: When you talk about the good old days, remember the present time is going to be "the good old days" of the future.



The splendid herd of purebred Brown Swiss Cattle owned by H. C. Fabian & Sons of Fergus Falls, Minn., is milked entirely with the De Laval Milker and the results obtained are of the highest order. Mr. Fabian and his sons consider the De Laval much superior to hand milking, believing it cleaner, faster and better for the cows. Their experience has convinced them that no other method of milking produces greater yield, cleaner milk or eliminates more labor than the De Laval.

These Dairymen Use the De Laval Milker for More and Cleaner Milk

THE popularity and use of the De Laval Milker has developed very rapidly in every dairy section of the country. This has been especially noticeable among the leading breeders and dairymen, for men of this type have quickly realized the many advantages to be derived from the use of the De Laval "Better Way of Milking." Many notable records have been made by cows milked with the De Laval throughout their entire test periods.

Owners and breeders of fine cows have become convinced through actual use that the De Laval assists greatly in bringing each cow up to her point of maximum production, aids in maintaining teats and udders in the best of health and general condition and provides assurance of the best milking day after day for each cow, no matter who does the milking.

Dairymen endorse it warmly because it has proven that it can produce *more* milk, that it makes possible the production of *cleaner* milk with less effort and that it saves them valuable time and labor, thereby reducing expenses and production costs, which naturally means greater profits.

Under all conditions of use the De Laval Milker has proven that it can and does fulfill the claims made for it. There is no test so severe as actual use and thousands of leading cow owners, both large and small, after years of use have pronounced the De Laval Milker an unqualified success in every way.

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Center: The Ford and Hollister Ranch at Darby, Montana, is widely known as the home of an outstanding herd of purebred Holsteins. Many excellent records have been made at this farm by cows milked with the De Laval Milker. Below: Mr. B. N. Niblick, owner of Homestead Farm at Decatur, Ind., and the fine Guernseys shown below, says that the De Laval Milker lightens his labor and greatly aids in the production of more and cleaner milk.



Below: These splendid Jerseys are owned by Mr. E. A. Darling, a leading New England dairyman and ex-president of the American Jersey Cattle Club. A De Laval Milker was installed seven years ago on Mr. Darling's beautiful estate at East Burke, Vermont, and has proved a complete success in every way. It is indeed a tribute that such men as Mr. Darling, who are closely akin to the dairy industry, use and endorse the De Laval.



**End of
Volume**